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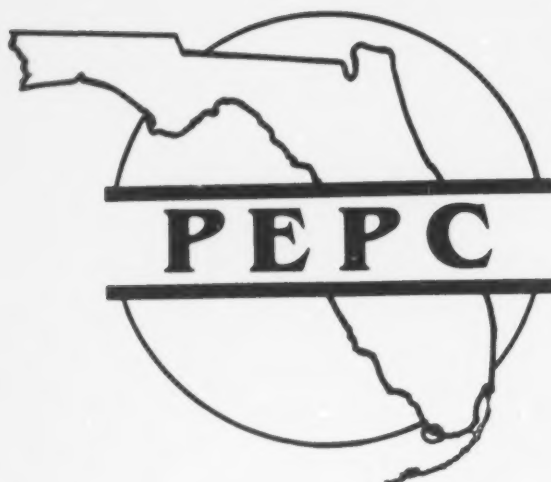
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ABSTRACT

The Florida state legislature mandated a study of the cost of medical, dental, and veterinary education in Florida. The study examined the funding and expenditures for several state institutions using various data sources as well as information presented at a series of public meetings. Findings of the study revealed that estimated expenditures per Florida undergraduate medical student ranged from \$54,700 to \$64,800 in 1989-90. Unrestricted state appropriations contributed from 4.9 to 29.6 percent of total revenues. In comparison, the Association of American Medical Colleges reported that unrestricted state appropriations provide 25 percent of total revenues nationally. In contrast, unrestricted state appropriations to private medical schools nationally accounted for only 1.7 percent of revenues in 1989-90. These results suggest the following recommendations: (1) annual submission of financial data reports from the medical schools to the Office of Health Affairs of the Board of Regents; (2) continued state support of the medical loan repayment programs; (3) tying public funds for medical schools to increasing the number of women and minorities practicing in the State and to increasing the number of physicians practicing in primary care specialties and in underserved areas. Included in the report are 10 tables. Appendixes contain a comparison of tuition levels and excerpts from other reports and correspondence on medical education finance. (JB)

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THE COST OF MEDICAL, DENTAL, AND VETERINARY MEDICAL EDUCATION

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Report and Recommendations of the Florida Postsecondary Education Planning Commission

1992 - REPORT 2

POSTSECONDARY EDUCATION PLANNING COMMISSION

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New Port Richey

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Mount Dora

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Panama City

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Pensacola

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Tallahassee

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Margate

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Auburndale

Robert B. Mautz
Gainesville

Mark K. Wheeler
Fort Lauderdale

William B. Proctor, Executive Director

The Postsecondary Education Planning Commission, initially created by executive order in 1980 and subsequently given statutory authority (SS 240.145 and 240.147, Florida Statutes), serves as a citizen board to coordinate the efforts of postsecondary institutions and provide independent policy analyses and recommendations to the State Board of Education and the Legislature. The Commission is composed of 11 members of the general public and one full-time student registered at a postsecondary education institution in Florida. Members are appointed by the Governor with the approval of three members of the State Board of Education and subject to confirmation by the Senate.

The major responsibility of the Commission is preparing and updating every five years a master plan for postsecondary education. The enabling legislation provides that the Plan "shall include consideration of the promotion of quality, fundamental educational goals, programmatic access, needs for remedial education, regional and state economic development, international education programs, demographic patterns, student demand for programs, needs of particular subgroups of the population, implementation of innovative educational techniques and technology, and the requirements of the labor market. The capacity of existing programs, in both public and independent institutions, to respond to identified needs shall be evaluated and a plan shall be developed to respond efficiently to unmet needs."

Other responsibilities include recommending to the State Board of Education program contracts with independent institutions; advising the State Board regarding the need for and location of new programs, branch campuses and centers of public postsecondary education institutions; reviewing public postsecondary education budget requests for compliance with the State Master Plan; and periodically evaluating the State's 28 regional coordinating councils for vocational education and adult general education.

Further information about the Commission, its publications, meetings and other activities may be obtained from the Commission office, 231 Collins Building, Department of Education, Tallahassee, Florida, 32399-0400; telephone (904) 488-7894.

POSTSECONDARY EDUCATION PLANNING COMMISSION

***THE COST OF MEDICAL, DENTAL, AND VETERINARY EDUCATION
IN FLORIDA***

Prepared in Response to Specific Appropriations 577A
of the
1991 General Appropriation Act
Chapter 91-193, Laws of Florida

1992 - Report 2

January, 1992

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EXECUTIVE SUMMARY

Proviso language accompanying Specific Appropriation 577A of the 1991 General Appropriations Act directed the Postsecondary Education Planning Commission to:

conduct a study of the funding for University of Florida Health Center, University of South Florida Medical Center and the First Accredited Medical School. To the extent that necessary supporting data are available, the study shall examine expenditures over a period of years. The study shall include, but not be limited to, an analysis of the funds which are expended to support students in medicine, dentistry and veterinary medicine by fund source on a per student basis as well as an analysis of the various activities or cost objectives which are funded by the college and fund source. As a basis for this study, the Commission shall use the cost accounting procedure which was developed by the Board of Regents as a result of proviso language in the 1985 and 1986 General Appropriations Acts. The Commission, in consultation with the Office of the Auditor General, shall expand or revise this cost accounting procedure, as required, to implement the provisions of this study. The Commission shall submit a report of its findings to the President of the Senate and the Speaker of the House of Representatives on or before January 15, 1992.

To direct this study, the Commission Chairman appointed a Program Committee consisting of Tully Patrowicz, Chairman, Vilma Diaz, Alan Fickett, Robert Kerrigan, Robert Taylor, and Mark Wheeler. The Committee held seven public meetings at which time information was presented on medical, dental, and veterinary education in Florida; state priorities for medical, dental, and veterinary education; student and labor market profiles; and cost and funding trends and methods for analysis. Dr. J. Kent Caruthers from MGT of America, Inc. was

engaged to assist with the technical aspects of the cost study. His work focused on analysis of cost activities by fund source.

In the 1982 *Master Plan for Florida Postsecondary Education*, the Commission recognized the importance of health professions education programs and stated that such programs require separate and independent analysis of needs, student demand, cost, and coordination. The *Master Plan* also stated that a policy on the State's responsibility for funding medical education should be included in a comprehensive plan for health professions education. A subsequent Commission study completed in 1983, *Health Professions Report*, reported that the high cost of health professions education was due primarily to the technology and clinical settings required as well as to the need to provide faculty in clinical education with salaries competitive with the incomes of private practitioners. The burden for funding the cost of health professions education fell increasingly on state governments in the early 1980s as federal support declined.

Previous Commission reports identified a number of priorities for the State including the adequacy of supply, the availability of primary care, geographic distribution, and gender and racial mix for the fields of medicine, dentistry, and veterinary medicine. The characteristics of the labor market and of graduates from and students enrolled in Florida's professional programs reveal a mixed assessment of the status of these priorities. The number of medical, dental, and veterinary professionals continues to increase with indications that the proportion of women and minorities will also continue to increase. On the other hand, rural communities continue to be underserved. A proportion of graduates from Florida's programs appear to be selecting primary care specialties and geographic areas where health

care needs are high, yet the number of graduates declined over the past few years. The State remains highly dependent on immigration of health professionals.

An examination of funding trends and patterns in other states suggests that history and tradition play an important role in determining funding for individual institutions and that no clear advantage appears to lie in one funding pattern over another. Currently, efforts to link funding to state priorities reflect an increased interest in outcomes and assessment.

When analysis shifts from the state level to program funding and costs, a complex array of factors complicate interinstitutional comparisons. With all the possible funding and cost factor combinations, it is unlikely that any two medical schools are alike even when they are located in the same state. Although designing a cost methodology to provide consistent analysis of funding and expenditures across institutions with varied cost factor combinations has been attempted, available designs are significantly limited. Comparison remains dependent upon understanding the impact of the factors influencing revenues and costs.

The State of Florida contributes to the support of two allopathic medical schools in public universities, one allopathic medical school in an independent university, and one osteopathic medical school in an independent university. The State also supports a dentistry school and a veterinary medicine school. This report focuses on the allopathic medical schools in Florida with information concerning dentistry and veterinary medicine included when available. Medical schools at the University of Miami and Southeastern University of the Health Sciences are funded on a capitation basis which allows for clear recognition of

state policy and interest in regard to independent institutions.

The public medical schools have been funded by the appropriation of a lump sum to the University of Florida Health Center and the University of South Florida Medical Center. Although the funds are appropriated by distinct budget issues, the funding process does not distinguish the amount of dollars to be spent for the specific programs within the centers. The University of Florida has six colleges in the Health Center and the University of South Florida has three colleges in its Medical Center. The Commission's 1985 study, *Medical Education in Florida*, reported that lump sum budgeting for academic health centers is fairly common in other states and is a recognition on the part of legislatures of the diverse missions of academic health center in which the training of health professionals is just one component, others being research and patient service. While the current funding process allows institutions considerable flexibility in how they allocate their funds, the process also makes it difficult to determine legislative intent or to track the path of state appropriations.

The methodology for this study was designed to address legislative proviso and included two sources of data. Replicating the cost accounting procedure developed and coordinated by the Board of Regents Office of Health Affairs in 1987 provided information on the cost per student and financial analysis of sources of funds and expenses over a period of years. The second source of data was the Annual Financial Questionnaire prepared by each medical school annually for the Liaison Committee on Medical Education (LCME) of the Association of American Medical Colleges. Data from the Annual Financial Questionnaire were used to address legislative interest in connecting expenditures

to funding source and for on-going financial analysis. Although these data sources provided the most information available to address the study proviso, both sources have significant limitations which restrict the conclusions which may be drawn.

The findings of the cost study reveal that estimated expenditures per undergraduate medical student ranged from \$54,700 to \$64,800 in Florida in 1989-90. Unrestricted state appropriations in Florida contributed 4.9 percent to total revenues at the University of Miami medical school and 19.4 and 29.6 percent to the University of Florida and University of South Florida medical schools, respectively, in 1989-90. In comparison, the Association of American Medical Colleges reported that data compiled nationally from the 1989-90 Annual Financial Questionnaire reveal that unrestricted state appropriations continued to be a very important source of funds for public schools, providing 25 percent of their total revenues in 1989-90. In contrast, unrestricted state appropriations to private medical schools nationally accounted for only 1.7 percent of revenues in 1989-90. Dr. Caruthers assisted the Commission in addressing legislative interest in analyzing expenditures of cost activities by fund source and providing a means for on-going fiscal analysis of costs and funding (Appendix D). The representative from the Office of the Auditor General provided additional technical assistance and reviewed draft reports, the methodological design, and study findings (Appendix E).

Although expense data from the Annual Financial Questionnaire more accurately represent accounting records than programmatic costs, the information contained in the Annual Financial Questionnaire provides the most accurate fiscal data available on individual medical schools, schools characterized as public or private, and total schools nationally. The data lend

themselves to comparisons with other institutions, individually and nationally, as well as longitudinal comparisons for a single medical school. Aggregate data are published nationally by the Association of American Medical Colleges each year.

In summary, this report calls for annual submission of the LCME financial data reports from the medical schools to the Office of Health Affairs of the Board of Regents to assist policymakers with state oversight. In addition, the report calls for continued state support of the medical loan repayment programs and for tying public funds for medical schools to increasing the number of women and minorities practicing in the State and increasing the number of physicians practicing in primary care specialties and in underserved areas of the State. The review resulted in the following specific recommendations:

Recommendations:

1. The University of Florida Health Center, University of South Florida Medical Center, and University of Miami School of Medicine should annually submit copies of the Liaison Committee on Medical Education's Annual Medical School Financial Questionnaire to the Board of Regents Office of Health Affairs. The Office of Health Affairs should maintain and provide access to these annual reports. Due to the limitations summarized above, the Annual Financial Questionnaire cannot be utilized to determine a valid cost per student, and the expenditure data more accurately represent accounting records than true programmatic costs. The Annual Financial Questionnaire, however, contains accurate revenue data and information for longitudinal and interinstitutional comparison and is available at minimal cost to the medical schools and the State.

2. The medical schools in Florida, the Board of Regents Office of Health Affairs, and the Legislature should develop incentive funding formulas that clearly link additional public funds to one or both of the following objectives: increasing the number and percentage of women and minorities, who, having graduated from medical schools in Florida, choose residencies in Florida and establish practices in the State; and, increasing the number and percentage of graduates from medical schools in Florida who choose primary care residencies in Florida and establish primary care practices in underserved areas of the State.

3. The State should continue to support the state funded Medical Education Reimbursement and Loan Repayment Program and the Department of Health and Rehabilitative Services Health Manpower Program's efforts to place primary care physicians in medically underserved areas of the State.

I. INTRODUCTION

Proviso language accompanying Specific Appropriation 577A of the 1991 General Appropriations Act directed the Postsecondary Education Planning Commission to:

conduct a study of the funding for University of Florida Health Center, University of South Florida Medical Center and the First Accredited Medical School. To the extent that necessary supporting data are available, the study shall examine expenditures over a period of years. The study shall include, but not be limited to, an analysis of the funds which are expended to support students in medicine, dentistry and veterinary medicine by fund source on a per student basis as well as an analysis of the various activities or cost objectives which are funded by the college and fund source. As a basis for this study, the Commission shall use the cost accounting procedure which was developed by the Board of Regents as a result of proviso language in the 1985 and 1986 General Appropriations Acts. The Commission, in consultation with the Office of the Auditor General, shall expand or revise this cost accounting procedure, as required, to implement the provisions of this study. The Commission shall submit a report of its findings to the President of the Senate and the Speaker of the House of Representatives on or before January 15, 1992.

To direct this study, the Commission Chairman appointed a Program Committee consisting of Tully Patrowicz, Chairman, Vilma Diaz, Alan Fickett, Robert Kerrigan, Robert Taylor, and Mark Wheeler. The Committee held seven public meetings at which time information was presented on medical, dental, and veterinary education in Florida; state priorities for medical, dental, and veterinary education; student and labor market profiles; and cost and funding trends and methods for analysis. Dr. J. Kent Caruthers from MGT of America, Inc. was

engaged to assist with the technical aspects of the cost study. His work focuses on analysis of cost activities by fund source.

In the 1982 *Master Plan for Florida Postsecondary Education*, the Commission recognized the importance of health professions education programs and stated that such programs require separate and independent analysis of needs, student demand, cost, and coordination. The *Master Plan* also stated that a policy on the State's responsibility for funding medical education should be included in a comprehensive plan for health professions education. A subsequent Commission study completed in 1983, *Health Professions Report*, reported that the high cost of health professions education was due primarily to the technology and clinical settings required as well as to the need to provide faculty in clinical education with salaries competitive with the incomes of private practitioners. The burden for funding the cost of health professions education fell increasingly on state governments in the early 1980s as federal support declined.

Beyond recognizing the high cost of health professions education and the increased funding burden on state governments, the *Health Professions Report* found that Florida did not have good information on the financing and costs of health professions education. Funding for the State's academic health centers, where much of health professions education takes place, continues to come from several sources in addition to state government--student tuition and fees, federal research grants, patient fees, gifts and endowments, and contracts with other public and private agencies. This money supports a complex array of activities including professional and graduate education, research, patient services, and community service. Attempts to obtain good cost data on these activities in the early 1980s were described in

the *Health Professions Report* as notably unsatisfactory in Florida.

The State of Florida contributes support to two allopathic medical schools in public universities, one allopathic medical school in an independent university, and one osteopathic medical school in an independent university. The State also supports a dentistry school and a veterinary medicine school. This report focuses on the allopathic medical schools in Florida with information concerning dentistry and veterinary medicine included when available. Medical schools at the University of Miami and Southeastern University of the Health Sciences are funded on a capitation basis which allows for clear recognition of state policy and interest in regard to independent institutions. In regard to public support for private medical education programs, the Commission recommended in its 1985 study, *Medical Education in Florida*, that:

the State of Florida should continue to recognize the role of the independent sector as an effective resource for meeting the state's needs for physicians and for providing Florida residents with access to medical education.

The 1985 report reaffirmed the position stated in the *Master Plan*, that although policy and program decisions of independent institutions should remain the responsibility of the boards of trustees, independent institutions which receive state funds are responsible for the proper fiscal accounting of all contractual agreements.

The public medical schools have been funded by the appropriation of a lump sum to the University of Florida Health Center and the University of South Florida Medical Center. Although the funds are appropriated by distinct budget issues, the funding process does not distinguish the amount of dollars to be spent for the specific programs within the

centers. The University of Florida has six colleges in the Health Center and the University of South Florida has three colleges in its Medical Center. The Commission's 1985 study, *Medical Education in Florida*, reported that lump sum budgeting for academic health centers is fairly common in other states and is a recognition on the part of legislatures of the diverse missions of academic health centers in which the training of health professionals is just one component, others being research and patient service. While the current funding process allows institutions considerable flexibility in how they allocate their funds, the process also makes it difficult to determine legislative intent or to track the path of state appropriations. In the 1985 report, the Commission recommended that the Board of Regents, in cooperation with the University of Miami, develop a cost accounting procedure capable of producing comparable data on the costs of medical education for all medical schools.

Medical Education in Florida (1985) also reviewed tuition levels for students in medical education programs and compared tuition to instructional costs. The comparison found that tuition in Florida's public programs accounted for approximately eight percent of the instructional costs. The Commission recommended that tuition and fees at the public medical schools in Florida be increased to represent approximately 13 percent of the costs of instruction to bring Florida tuition in line with that of other large states and bring the percentage of costs borne by medical students closer to that borne by undergraduates.

The methodology for this study was designed to address legislative proviso and included two sources of data. Replicating the cost accounting procedure developed and coordinated by the Board of Regents Office of Health Affairs in 1987 provided information on the cost per student and financial analysis

of sources of funds and expenses over a period of years. The second source of data was the Annual Financial Questionnaire prepared by each medical school annually for the Liaison Committee on Medical Education (LCME) of the Association of American Medical Colleges. Data from the Annual Financial Questionnaire was used to address legislative interest in connecting expenditures to funding source and for on-going financial analysis. Although these data sources provided the most information available to meet proviso directives, both sources have significant limitations which restrict conclusions being drawn from the findings.

This current study examines state funding for medical, dental, and veterinary education. Chapter II provides an overview of medical, dental, and veterinary education and the professions in Florida. Chapter III describes funding trends and patterns in other states, factors that influence costs and funding, and cost analysis methods for higher education. Chapter IV contains a description of the study design and findings. Chapter V reviews the issues identified for this study followed by Commission recommendations. A comparison of tuition levels among the member states of Southern Regional Education Board and nationally is provided in Appendix A. The consultant's report on medical education financial comparison is provided in Appendix D.

II. MEDICAL, DENTAL, AND VETERINARY EDUCATION IN FLORIDA

The study of funding and the costs of medical, dental, and veterinary education in Florida extends beyond a fiscal analysis of program budgets. The costs and funding are driven in part by the consideration of the history of educational programs in Florida, characteristics of students and graduates from the State's programs, and characteristics of the labor market. This chapter provides an overview of these interrelated areas of consideration.

History of Medical, Dental, and Veterinary Education in Florida

In the mid-1940s, a number of states were interested in increasing the number of professionals trained in the south through a cooperative effort among the southern states. The governors of twelve southern states signed a regional pact in 1948 which established Southern Regional Education Scholarships. By 1951, the Southern Regional Education Board (SREB) developed a plan for professional education in medicine, dentistry, and veterinary medicine for students residing in states without professional schools in these fields. Under the plan, states made payments to help defray the school expense for a specified number of students who otherwise might not be accepted. The states paid \$1500 per year to medical and dental schools, and \$1000 per year to veterinary schools for each student. The participating schools gave admission preference to those out-of-state students who were awarded Southern Regional Education Scholarships.

At the time the regional pact was adopted, Florida had no professional schools for medicine, dentistry, or veterinary medicine. Under the regional plan, nine institutions accepted Florida students and received payment from the State for the 1952-53 academic year. Of the nine institutions, two

institutions accepted black students--Meharry Medical College for 22 medical students and one dental student and Tuskegee Institute for one veterinary student. The remaining seven institutions accepted only white students--155 in medicine, 72 in dentistry, and 36 in veterinary medicine. As the State established programs in medicine, dentistry, and veterinary medicine and as these programs achieved accreditation, state funding for SREB scholarships for these programs was phased out.

Interest in establishing a school of medicine in Florida increased in the late-1940s. The Legislature, wishing to increase the opportunity for citizens to acquire a medical education, provided incentive for institutions to found a medical school by passing legislation in 1951 to give financial support to the first accredited medical school for the education of medical students (Ch. 51-26763, Laws of Florida). The University of Miami, an independent institution, established the first school of medicine to meet the statutory requirements and has since received state funds on a capitation basis as provided for in Section 242.62, Florida Statutes. In 1951, the Legislature appropriated \$3,000 for each of 75 first-year medical students, who, along with their parents, were bona fide residents of the State of Florida. Forty years later, the 1991 Legislature appropriated \$11,918,681 to the University of Miami School of Medicine for 500 medical students who are Florida residents (\$23,837 for each student).

There are two public medical programs in the State--one at the University of Florida and one at the University of South Florida. Although the University of Florida was authorized by the 1949 Legislature to establish a medical school, no state funds were received until 1953. The first class of medical students entered the University of Florida in the fall of

1956. In 1960, the University of Florida College of Medicine received accreditation by the American Medical Association and the Association of American Medical Colleges and graduated its first class of 40 students. The University of South Florida College of Medicine was authorized by the 1965 Legislature and opened with its charter class in 1971.

The College of Medicine at the University of Florida is part of the J. Hillis Miller Health Center which also includes the colleges of dentistry, veterinary medicine, nursing, health related professions, and pharmacy. The College of Dentistry, the only school of dentistry in Florida, enrolled its charter class in 1972. The College of Veterinary Medicine was authorized by the 1965 Legislature and enrolled its charter class in 1976. The College of Medicine at the University of South Florida is part of the Medical Center which also includes the colleges of nursing and public health. Both the University of Florida Health Center and the University of South Florida Medical Center receive lump sum funding from the State. The 1991 General Appropriations Act funded the University of Florida Health Center at \$106.254 million for 1991-92 (a decrease of 2.7 percent from the 1990-91 appropriation) and the University of South Florida Medical Center at \$43.047 million for 1991-92 (a 4.4 percent decrease from the 1990-91 appropriation).

Enrollments and Graduates from Florida's Programs in Medicine, Dentistry, and Veterinary Medicine

The Southern Regional Education Board compares numbers of graduates to population levels for states in the region and to the nation as a whole. According to SREB data, Florida produces fewer medical, dental, and veterinary graduates per 100,000 population

than the region as a whole (Table 1). The southern region produces proportionately fewer physicians (allopathic and osteopathic) and dentists per 100,000 population than the nation as a whole. While the region produces proportionately more veterinarians per 100,000 population than the nation as a whole, Florida produces proportionately fewer veterinarians than the nation or region. While Florida represents 15.4 percent of the region's population, programs in the State produce 9.5 percent of the physicians (from schools of medicine and osteopathy), 6.3 percent of the dentists, and 9.3 percent of the veterinarians who graduate from programs in the region. These data support the report that the State relies heavily on the in-migration of physicians, dentists, and veterinarians; and, in turn, these data would not support decreases in current enrollment levels for programs in the State.

Capacity of Programs

Two components of the concern for the cost of medical education include enrollment levels compared to program capacity and the proportion of students enrolled who are Florida citizens. In general the public programs in medicine and the veterinary medicine filled their first-year classes to capacity in 1990 (115 and 96 for the medical programs at the University of Florida and the University of South Florida and 80 for the veterinary medicine program). Medical school first-year enrollment at the University of Miami was 129 in 1990 (140 student capacity) representing a planned enrollment decrease. The dental program at the University of Florida enrolled 76 first-year students in 1990 (80 student capacity). The Commission's 1991 report, *Florida Health Professions Education Profiles*, reported that enrollments for the medical, dental, and veterinary programs have remained high and relatively stable during the past several years.

TABLE 1

**COMPARISON OF FLORIDA POPULATION AND GRADUATION INFORMATION
AMONG MEMBER STATES OF THE SOUTHERN REGIONAL EDUCATION BOARD**

HEALTH PROGRAMS	1987 POPULATION (1,000s)	1990 GRADUATES	GRADUATES PER 100,000	PERCENT OF SREB POPULATION	PERCENT OF SREB GRADUATES
Medicine and Osteopathy - Florida	12,938	472	3.65	15.4%	9.5%
- SREB	84,173	4,950	5.88	100.0%	100.0%
Dentistry - Florida	12,938	67	0.52	15.4%	6.3%
- SREB	84,173	1,061	1.26	100.0%	100.0%
Veterinary - Florida	12,938	73	0.56	15.4%	9.3%
- SREB	84,173	787	0.93	100.0%	100.0%

Source: Southern Regional Education Board, 1991.

Most medical students enrolled in programs in Florida are residents of the State. For example, 100 percent of the first-year classes for Fall 1990 at both of the public universities are residents. Additionally, the University of Miami receives capitation funds from the State for up to 500 medical students (560 capacity). In other words, over 95 percent of the students enrolled in medical programs in Florida are classified as residents of the State.

Applicant Trends

The retention of students through graduation is related to the quality of the students enrolled. One measure used as an indicator of quality is the ability of the program to be selective as to the students accepted for enrollment. The ratio of the number of applicants to students accepted to a program suggests the degree of selectivity. Nationally, the ratio of applicants to acceptances declined during the mid-1980s, but has increased for the past three years. The number of applicants increased 15 percent for the Fall of 1991 over 1990.

Similar trends in applicants occurred in Florida medical schools, however, the annual ratios were significantly higher. For example, nationally, the applicant-to-acceptance ratio was 1.6 in 1989 and 2.1 in 1991. During the same two years, the ratio was 12.8 and 16.3 for the University of Florida and 6.2 and 15.9 for the University of South Florida. The University of Florida Colleges of Dentistry and Veterinary Medicine also recorded higher ratios than national ratios. Thus, in terms of number of applicants, the Florida programs have experienced greater selectivity than schools nationally.

Selection of Specialty Area

Upon completion of the four-year M.D. program, graduates select an area of specialization for residency training. The primary care specialty areas of general and family practice, obstetrics and gynecology, general internal medicine, and general pediatrics have been identified as areas of need for the State. Physicians in these areas serve as the first contact for medical care for

general and preventive health care and for referral to the secondary level of physicians in more specialized areas of medicine, who are usually located closer to medical centers.

Table 2 portrays the selection of primary care specialty areas by graduates from the three medical schools in the State for 1987 and 1990. For the most part, the selection of specialty areas among the schools appears to vary without any distinct pattern with the exception of more graduates consistently selecting general internal medicine.

Table 3 presents primary care selection by graduates from the three medical schools over the four-year time period from 1987 to 1990. Despite some variation, the total numbers of graduates selecting primary care and the percentages these graduates represent of the total number of graduates reveal that, although the University of Miami graduates the largest number students selecting primary care specialty areas and the University of South Florida graduates the fewest number, the University of South Florida has the largest percentage of graduates selecting primary care areas and the University of Miami has the lowest percentage. A year-by-year analysis of the numbers and totals does not indicate any trends or patterns.

The medical schools annually report the location of residencies selected by their graduates to the Board of Regents Office of Health Affairs. Between 1988 and 1990, the percentage of graduates selecting residencies in Florida annually ranged between 37 and 48 percent for the three schools, and the total over the three year period averaged between 40 and 42 percent at each of the schools.

Enrollments and Graduates by Gender and Race

The need to increase participation and retention of minority students in medicine,

dentistry, and veterinary medicine has been a concern expressed in previous Commission reports and continues to be viewed as a priority in efforts to better serve the health needs of a culturally diverse State. A number of programs have been implemented to address this concern. For example, the University of Florida College of Medicine works with high school counselors and brings sophomore and junior high school students to campus for a health science teach-in. The University of Miami School of Medicine actively recruits at predominantly black colleges in the Southeast and sponsors a four-week summer instructional program for each entering class with the assistance of state funding. The University of Miami also offers an on-campus Health Careers Motivation Program each summer, which is designed to identify, recruit, and select minority students and thus facilitate their entry into health professions programs.

Table 4 presents first-year enrollments for medical programs in Florida from Fall 1987 to Fall 1990 by gender and race. Although there is fluctuation in the numbers and percentages of female and nonwhite students, there are a few trends evident. Enrollment at the University of Miami shows consistent increases in the percentage of nonwhite first-year students with Hispanic and Asian students showing consistent increases in percentages. The percentage of nonwhite first-year students also increased consistently at the University of South Florida with consistent increases in the numbers and percentages of black and Asian students. In 1990, the University of Miami had the highest percentage of nonwhite, Hispanic, and Asian students of the three programs in the State. The University of South Florida had the highest percentage of black students.

TABLE 2

**SELECTION OF PRIMARY CARE BY SPECIALTY AREAS
BY GRADUATES FROM FLORIDA'S MEDICAL PROGRAMS
1987 AND 1990**

PRIMARY CARE SPECIALTY AREAS	1987 GRADUATES						1990 GRADUATES					
	UM		UF		USF		UM		UF		USF	
	#	%	#	%	#	%	#	%	#	%	#	%
General and Family Practice	10	5.6	12	10.4	10	10.9	13	9	8	7	6	6.6
Obstetrics and Gynecology	13	7.3	6	5.2	7	7.6	18	12	7	6	9	9.9
General Internal Medicine	59	33.0	35	30.4	34	37.4	44	30	28	24	30	33.0
General Pediatrics	10	5.6	17	14.7	7	7.6	15	10	15	13	10	11.0
Total Primary Care	92	51.5	70	60.7	58	63.5	90	61	58	50	55	60.5
Total Class	177	100	115	100	91	100	148	100	116	100	91	100

Note: The distribution of graduates selecting specialty areas for the University of Miami in 1987 included 36 graduates from the M.D.-Ph.D. program which was subsequently terminated.

Sources: Annual reports from the University of Miami, the University of Florida, and the University of South Florida to the BOR Office of Health Affairs.

TABLE 3

**SELECTION OF PRIMARY CARE SPECIALTIES
BY GRADUATES FROM FLORIDA'S MEDICAL PROGRAMS
1987 TO 1990**

	UNIVERSITY OF MIAMI		UNIVERSITY OF FLORIDA		UNIVERSITY OF SOUTH FLORIDA		TOTAL
	#	%	#	%	#	%	
1987	92	51.5	70	60.7	58	63.5	220
1988	79	58.5	67	62.0	59	64.8	205
1989	69	47.9	71	67.0	64	68.8	204
1990	90	61.0	58	50.0	55	60.5	203
Totals	330	54.7	266	59.9	236	64.4	832

Sources: Annual reports from the University of Miami, the University of Florida, and the University of South Florida to the BOR Office of Health Affairs.

TABLE 4

**FIRST-YEAR ENROLLMENTS FOR MEDICAL PROGRAMS IN FLORIDA
BY GENDER AND RACE
FALL 1987 TO FALL 1990**

MEDICAL EDUCATION PROGRAMS	FALL 1987		FALL 1988		FALL 1989		FALL 1990	
	#	%	#	%	#	%	#	%
University of Miami-Total	145	100%	140	100%	136	100%	129	100%
Male	93	64	92	66	95	70	80	62
Female	52	36	48	34	41	30	49	38
White	104	72	95	68	82	60.3	76	59
Black	11	7.5	15	11	10	7.4	8	6
Hispanic	19	13	18	13	26	19.1	26	20
Asian	11	7.5	12	9	18	13.2	19	15
American Indian or Alaska Native	-	-	-	-	-	-	-	-
University of Florida - Total	117	100%	118	100%	115	100%	115	100%
Male	75	64	71	60	59	51	65	57
Female	42	36	47	40	56	49	50	43
White	89	76	93	79	93	81	92	80
Black	6	5	7	6	10	9	6	5.2
Hispanic	9	8	7	6	7	6	5	4.4
Asian	12	10	11	9	5	4	12	10.4
American Indian or Alaska Native	1	1	-	-	-	-	-	-
University of South Florida - Total	99	100%	98	100%	100	100%	97	100%
Male	71	72	66	67	64	64	64	66
Female	28	28	32	33	36	36	33	34
White	80	81	78	80	77	77	68	70
Black	2	2	3	3	3	3	7	7
Hispanic	11	11	9	9	11	11	8	8
Asian	6	6	8	8	9	9	13	14
American Indian or Alaska Native	-	-	-	-	-	-	1	1

Sources: Annual reports from the University of Miami, the University of Florida, and the University of South Florida to the BOR Office of Health Affairs.

Table 5 presents statewide totals for first-year enrollments at the medical schools for Fall 1987 to Fall 1990. Total first-year enrollments for the State declined by 20 first-year students over the four-year period. The percentages of women and nonwhite students enrolled increased consistently to 39 and 30.9 percent in 1989. The numbers and percentages of blacks and Hispanic students fluctuated during the time period and

equalled 6.2 and 11.4 percent in Fall 1990. The numbers and percentages of Asian students increased consistently and equalled 13 percent in Fall 1990.

The Commission's 1991 report, *Florida Health Professions Education Profiles*, presented the numbers and percentages of minority and female students graduating from the Colleges of Dentistry and Veterinary

TABLE 5

**STATEWIDE FIRST-YEAR ENROLLMENT TOTALS
FOR MEDICAL EDUCATION IN FLORIDA BY GENDER AND RACE
FALL 1987 TO FALL 1990**

MEDICAL EDUCATION	FALL 1987		FALL 1988		FALL 1989		FALL 1990	
	#	%	#	%	#	%	#	%
Statewide - Totals	361	100%	356	100%	351	100%	341	100%
Male	239	66	229	64	218	62	209	61
Female	122	34	127	36	133	38	132	39
White	273	75.6	266	74.7	252	71.8	236	69.1
Black	19	5.3	25	7.0	23	6.6	21	6.2
Hispanic	39	10.8	34	9.6	44	12.5	39	11.4
Asian	29	8.0	31	8.7	32	9.1	44	13.0
American or Alaska Native	1	0.3	-	-	-	-	1	0.3

Sources: Annual reports from the University of Miami, the University of Florida, and the University of South Florida to the BOR Office of Health Affairs.

Medicine at the University of Florida. As reported by the Board of Regents, the total number of degrees granted between 1989-88 and 1989-90 fluctuated in dentistry and veterinary medicine and totalled 67 and 74, respectfully, in 1989-90. For the College of Dentistry, the numbers and percentages of women, blacks, and Asians fluctuated during the three year period and equalled 35.8, 6.0, and 4.5 percents, respectfully, in 1989-90. The number of Hispanic graduates increased in dentistry to 14 (20.9 percent) in 1989-90. For graduates of the College of Veterinary Medicine, the numbers and percentages of women, blacks, and Asians also fluctuated during the three year period and equalled 55.6, 2.7, and 0.0 percents, respectfully, in 1989-90. The number of Hispanic graduates increased in veterinary medicine to six (8.1 percent) in 1989-90.

Although the number and percentage of college-going minority students have increased since the early 1980s and participation rates for Florida are comparable to national rates,

the number and percentage of minorities enrolled in and graduating from health professions programs in the State remain low. As reported in *Florida Health Professions Education Profiles* (1991), participation and graduation rates for blacks, Hispanics, and women varied among the programs of medicine, dentistry, and veterinary medicine. The statewide graduation rates were strong for women in veterinary medicine (55.4 percent) and for Hispanics in dentistry (20.9 percent) in 1989-90. With these exceptions and despite gains made in the program areas by each minority group, statewide minority and women participation rates remain low compared to the proportion represented in the State's population.

Financial Aid

The cost of education for students in medicine, dentistry, and veterinary medicine affects the supply of graduates both in terms of recruitment and retention. The 1985 Legislature established the Medical Education

Reimbursement and Loan Repayment Program (Section 240.4067, Florida Statutes) which addresses the Commission's previously stated concerns about the increasing indebtedness of medical students and the negative effects of medical school costs on access for students from minority and disadvantaged families as well as the concern for the maldistribution of medical professionals in the State. The program, funded with state and federal funds, makes payments that offset tuition paid by students, who practice in underserved location of the State, for studies leading to medical, physician assistant, or nursing degrees or licensure for practicing in a primary care specialty as identified by the Department of Health and Rehabilitative Services. The loan repayment program pays up to \$20,000 per year to physicians for a maximum of three years. The State's loan repayment program was appropriated \$115,000 by both the 1990 and 1991 Legislatures. In 1991, two osteopathic and eight allopathic physicians are in the program, and all funds are obligated to these 10 physicians.

In addition to the state program, the federal government funds a similar program, the National Health Service Corps Program, to provide placement services, scholarships, and loan repayment. In 1991, the federal funds allocated to Florida increased the number of positions available for loan repayment from 20 to 65 in designated Health Manpower Shortage Areas (HMSAs). The federal program entitled participating physicians to receive loan repayments up to \$25,000 per year. The Department of Health and Rehabilitative Services is recruiting physicians to fill available loan repayment positions.

The Delores A. Auzenne Fellowship Program, administered by the Office of Equal Opportunity Employment, serves black students in academic programs, including first professional degree programs, to help address

the underrepresentation of blacks in these programs. Between 1979-80 and 1990-91, black students received 79 awards in medicine, 16 awards in dentistry, and 26 awards in veterinary medicine programs. Another program to increase minority participation was created by the 1991 Legislature, the Florida Minority Medical Education Trust Fund, which authorizes the distribution of scholarships to enable minority students to pursue medical education at the University of Florida, University of South Florida, University of Miami, or Southeastern University of the Health Sciences. This legislation permits three scholarships for each medical school, however, it did not receive funding for 1991-92.

Characteristics of the Labor Market

As reported in *Florida Health Professions Education Profiles* (1991), labor market supply of and demand for health practitioners encompass present levels and geographic distribution of practitioners, licensure and regulation of the professions, sources for new practitioners, and the health care needs of the State. The number of programs for each profession and provisions of geographic access need to be kept in constant balance with efficient use of financial resources. The use of supply and demand data becomes integral to the targeted expansion of costly programs.

Data concerning enrollment and graduation trends and supply and demand projections were analyzed in the 1991 profiles report. In general, data revealed that the numbers of students graduating between 1987-88 and 1989-90 were stable in the State's medical and veterinary programs and fluctuated in the dental program. When considering the numbers of graduates from Florida programs, numbers and trends of new licenses issued annually, and projected average annual openings for doctors, dentists, and

veterinarians, analyses suggested that the supply, including Florida graduates and in-migration, will be adequate to meet the projected demand through the 1990s in all three areas of medicine, dentistry, and veterinary medicine. Regardless of analyses suggesting adequacy of supply, however, these health fields experience geographic maldistribution of practitioners resulting in inadequate health care delivery to rural areas with low economic conditions and a maldistribution among specialty areas within each profession. For example, the number of medical doctors per 100,000 population in Florida was 204 in 1991, compared to 237 nationally in 1988. The supply of medical doctors, however, is not distributed evenly throughout the State. Only one county, Glades, does not have a medical doctor in 1991. In the remaining counties, the ratio of medical doctors to 100,000 residents ranges from 18 to 608 (*1991 Health Care Atlas*).

Viewing the labor market of rural and low economic areas solely by the number of doctors does not fully portray the status of health care to underserved areas--the specialty areas of physicians are an important element of service. General and family practice is a specialty area that, along with obstetrics and gynecology, general internal medicine, and general pediatrics, comprise the specialty cluster area of primary care. In 1990, 9,447 medical doctors were licensed in the specialty cluster area of primary care (36.5 percent of the total 25,874 medical doctors licensed). General and family practice physicians comprise 42.9 percent (4,052) of the primary care physicians; physicians licensed in obstetrics and gynecology represented 11.4 percent (1,075), in general internal medicine represented 29.3 percent (2,272), and in general pediatrics represented 16.4 percent (1,548) (*1991 Florida Health Care Atlas*). In addition to primary care, the specialty area of geriatrics has received statewide interest to

help address the health care needs of Florida's aging population. The *1991 Florida Health Care Atlas* reports that there are 86 (0.3 percent) geriatrics specialists in the State in 1990.

In 1987-88, the Department of Health and Rehabilitative Services Office of Comprehensive Planning surveyed allopathic physicians in the State. In *Florida's Health Manpower 1987-88 Medical Doctors Survey* (1989), the Office of Comprehensive Health Planning reported that the distribution of physicians in Florida follows patterns observed nationally, with a heavy concentration of physicians in urban areas and a relative under-representation in rural areas. In 1987, 97.2 percent of physicians who responded to the survey practiced in urban areas (compared to 87 percent reported in a 1985 survey). The Office also reported that urban areas tend to attract more specialists than less populated rural areas due to the existence of large, well-equipped medical facilities. The majority of physicians practicing in rural areas (37.5 percent) identified general and family practice as their primary specialty (compared to 15.1 percent in urban areas), while those practicing in urban areas were more likely to indicate a more specialized discipline.

The adequacy of supply in the State is greatly dependent on physicians, who are trained in other states, in-migrating to Florida to practice medicine. The *1990 Florida Health Care Atlas* reports that Florida's three allopathic medical schools graduate approximately one-fourth (nearly 360) of the new practitioners licensed each year, compared to three-fourths resulting from in-migration. Based on the results of the 1987-88 survey, the Office reported that the majority of the State's allopathic physicians, yet only 21.6 percent, graduated from Florida programs; 27 percent of the practitioners 35 years and younger

graduated from Florida programs. Other states from which physicians graduated included New York (12.2 percent), Pennsylvania (8.0 percent), Illinois (5.5 percent), Georgia (4.8 percent), and North Carolina (3.7). Of the remaining 44.2 percent, 31.1 percent graduated from 12 states.

The Office also reported that the State's black allopathic physicians most frequently graduated from programs in Florida, Tennessee, District of Columbia, or New York. Women allopathic physicians most frequently graduated from programs in Florida, New York, or Pennsylvania. Among the 20,411 survey respondents who indicated race, 17,520 were white (85.8 percent), 1,707 were Asian (8.4 percent), 408 were black (2.0 percent), and 16 were American Indian (0.1 percent). The "other" category had 3.7 percent of the total (760), and 3,715 respondents (18.2 percent) indicated they were of Hispanic origin. Approximately 11.6 percent (2,384) of the survey respondents were women. The gender and race of respondents from the 1987-88 survey approximate that of the licensed medical doctors in Florida in 1990 as reported in the *1991 Health Care Atlas*: of the 25,874 licensed medical doctors in Florida in 1990, 3,076 were women (11.9 percent) and 4,606 were by Hispanic origin (17.8 percent). Asians represented 9.1 percent of the licensed medical doctors (2,355), blacks represented 2.2 percent (569), other nonwhite racial groups represented 13.7 percent (3,545), and 84.1 percent were whites.

Geographic maldistribution of practitioners is also a problem in the field of dentistry. The number of dentists per 100,000 population in Florida was 56.5 in 1988 compared to 58 nationally in 1988 (U.S. Department of Health and Human Resources, 1990). Yet, in 1988, two counties in Florida were without any

dentist, five counties had fewer than 15 dentists per 100,000 population, and the county having the greatest dentist-to-population ratio had 113 dentists per 100,000 population--twice the national average (*1989 Florida Health Care Atlas*). In the State University System report, *1986 Program Review Report on the College of Dentistry, University of Florida*, the program review consultant noted that dentists who in-migrate to Florida generally settle in the growing urban and economically strong regions of the State. While only two percent of the in-migrating dentists settle in rural areas, 15 percent of the Florida graduates settle in these less populated areas.

The *1991 Florida Health Care Atlas* reports that the number of Florida resident dentists with active licenses increased to 7,014 in 1991. Women dentists represent approximately six percent of the total in Florida in 1988 (*1989 Florida Health Care Atlas*). The Florida Department of Professional Regulation reports that the supply of veterinarians in Florida, as measured by the total number of licenses to practice increased to 6,600 in 1989-90 (4,681 active licenses).

Summary

Previous Commission reports identified a number of priorities for the State including the adequacy of supply, the availability of primary care, geographic distribution, and gender and racial mix for the fields of medicine, dentistry, and veterinary medicine. The characteristics of the labor market and of graduates from and students enrolled in Florida's professional programs reveal a mixed assessment of the status of these priorities. The number of medical, dental, and veterinary professionals continues to increase with indications that the proportion of women and minorities will also continue to increase. On the other hand, rural

communities continue to be underserved. A proportion of graduates from Florida's programs appear to be selecting primary care specialties and geographic areas where health care needs are high, yet the number of graduates declined over the past few years. The State remains highly dependent on immigration of health professionals.

III. COST AND FUNDING INFORMATION

In addition to the funding and cost considerations discussed in Chapter II, funding and cost analysis of medical, dental, and veterinary programs requires an analysis of sources and levels of funding and their relationship to cost objectives as specified in the proviso language related to the study. Chapter III reviews a brief history of funding trends and patterns in other states, factors that influence funding and costs, and cost analysis methods for higher education. In addition, a comparison of tuition levels among member states of the Southern Regional Education Board and nationally is provided in Appendix A.

Funding Trends and Patterns in Other States

During the 1960s and 1970s, federal and state initiatives to increase the number of physicians resulted in phenomenal growth in the number of medical education programs, enrollments, size of faculty, research programs, and public services. By the early 1980s, the availability of physicians increased and federal funding for medical education began to decrease. The loss of federal funds was primarily offset by increased state appropriations in the public sector, increased tuition in the independent sector, and increased faculty practice plans in both sectors.

While funding patterns were changing, the number of medical students choosing to specialize increased. Time required for training physicians lengthened, and the corresponding costs increased. States developed different funding patterns to support medical education at both the undergraduate (M.D.) and graduate (specialty or residency) levels. For example, the Southern Regional Education Board (SREB) reported in "Overview of Policies of SREB States on Funding of Graduate Medical Education"

(1989) that of its fifteen member states, two general funding patterns are utilized. One group of six states treats graduate medical education as an integrated part of the overall mission of public medical schools and funds undergraduate and graduate medical education through general appropriations to the medical schools' operations (Alabama, Arkansas, Maryland, Mississippi, North Carolina, and South Carolina). The other nine member states, including Florida, regard graduate medical education as auxiliary to the medical school function and thus do not include funding for graduate medical education in appropriations for medical school operations. These states typically fund graduate medical education either through direct support to teaching hospitals or through a variety of specialized programs intended to influence both the geographic and specialty distribution of physicians.

Appropriations for undergraduate medical education are typically made from general revenues through lump sum, capitation, or formula funding. Capitation funding may, or may not, carry the requirement of in-state student status for qualification and reduction of tuition levels for in-state students. State residency requirements are not uniformly applied since in-state status becomes blurred after time is spent in the states. In some cases, states try to attract future physicians by offering students in-state tuition rates. The level of funding based on capitation does not necessarily reflect the actual cost of instruction or tuition.

In states where formula funding is utilized, budget requests are frequently calculated from a formula based on student/faculty contact hours and a predetermined ratio between basic sciences and clinical work which are applied to faculty salary averages and salaries for instructional support. Further costs are

calculated and added for research, public service, library, student services, operations and maintenance, and other miscellaneous costs. The formula may also include requests for special projects. All cost components of the formula are totaled and submitted as a lump sum budget request to the legislatures. Actual appropriations are typically made to the higher education board over the medical schools and divided according to the ratios determined in the formula.

Concern for linking funding to state priorities led the Texas legislature to move to adopt a funding policy for the health-related institutions which reflects an interest in outcomes and incentives. In 1991, the Texas Legislature instructed the Texas Higher Education Coordinating Board to develop and implement a distribution of state aid in fiscal year 1993 called Performance State Aid. The Texas Higher Education Coordinating Board was directed to rely on a number of factors in developing and implementing Performance State Aid, some of which include the numbers of medical graduates entering first-year medical residencies in Texas, medical graduates entering primary care residencies (i.e., family medicine, internal medicine, obstetrics/gynecology, pediatrics, and geriatrics), residency program graduates who become board-certified, and medical graduates practicing in Health Professional Shortage Areas in Texas. The Performance State Aid formula is currently being developed by the coordinating board.

In states where lump sum appropriations are made without capitation or funding formulas, budget requests often reflect prior years' appropriations with adjustments for cost of living, changes in programs, state priorities, and the state's economy. In general, history and tradition play an important role in determining funding patterns for individual institutions. No clear advantage appears to lie in one funding pattern over another. All

institutions are affected by funding constrictions during difficult economic times.

Factors that Influence Funding and Costs

While funding patterns affect the budget request and appropriation processes, a variety of factors influence sources of funds and levels of costs. Since federal funding for medical education ended, state governments have paid an increasing proportion of the costs. State funding for medical education makes up an increasing proportion of the funding for higher education. Sources and levels of funds and costs are directly tied to the varied missions of medical schools. As reported in the 1983 SREB publication, *Factors that Influence the Financing and Cost of Medical Education*,

the major missions of a medical school are usually defined as: 1) teaching, 2) research, and 3) service. However, each of these has several subdivisions which are given varied emphasis in medical schools. The funds to support these different missions and the costs associated with them also vary dramatically. (p. 2)

Table 6 categorizes the factors that affect the sources of funding and the costs of medical schools. The age of the medical school influences combinations of factors which affect costs and funding and, to a large degree, predetermine its dependency on state funds. For example, since newer institutions are more likely to emphasize undergraduate medical education with a concentration on primary care specialties, their faculty practice plans generate lower net revenues. A stronger emphasis on undergraduate medical education may lessen the emphasis on research which, in turn, restricts success in attracting research grants. In the South, newer institutions are more frequently public institutions and therefore rely more heavily on state appropriations and less on tuition revenues.

TABLE 6
FACTORS WHICH AFFECT FUNDING AND COSTS OF MEDICAL SCHOOLS

Factors Related to the Missions of the Schools

Teaching Mission

- Emphasis on Undergraduate Education
- Emphasis on Graduate Medical Education
- Education of Biomedical Specialists
- Continuing Medical Education

Research Mission

- Basic Science Research
- Clinical Research
- Socio-epidemiological Research

Service Mission

- Patient Care Services
- Services to Special Centers
- Consultation and Miscellaneous Community Services

Factors Related to the Sponsorship
and Relationships of Medical Schools

Sponsor

- Private Medical School
- Public Medical School

Relationships

- Relationship with Parent Universities
- Relationship Between Medical Schools and Academic Health Centers
- Relationship with Teaching Hospitals

Factors Related to Demographic
Characteristics of Medical Schools

Geographic Location

Ethnic Origins of Students

Size of Schools

Factors Related to Local Administrative Decisions

Faculty/Student Ratios

Use of Volunteers and Part-Time Faculty

Faculty Practice Plan Arrangements

Tuition and Fellowships

Sites for Teaching

Source: McPheeters, H.L., M.D. (1983). Factors that influence the finances and cost of medical education.
Atlanta: Southern Regional Education Board.

Another factor is the size of the medical education program where small student enrollments limit any economies of scale and contribute to higher costs or lower revenues.

On the other hand, older and larger medical schools have developed secondary and tertiary care specialties which attract prominent faculty to teach graduate as well as undergraduate medical students and to conduct research. The practice plans that include secondary and tertiary care specialties generate higher net revenues to supplement faculty salaries and add to the overall medical school revenues. Prominent, specialized faculty are also more likely to attract research grants which in turn supplement faculty and administrative salaries, fellowships, and overhead costs. Older medical schools, compared to newer medical schools, tend to have larger enrollments, which enable the institutions to benefit from some economies of scale, thus lowering the cost per student.

With all the possible funding and cost factor combinations, it is unlikely that any two medical schools are alike, even when they are located in the same state, making comparisons among schools difficult. Such differences in costs and funding encourage individual institutional analysis of budgetary needs and may result in separate funding measures for each medical school in a state.

Cost Analysis Methods for Higher Education

In contrast to commercial organizations that produce definable products or services, the activities of higher education, i.e., instruction, research, and service, are not easily separated or measured. Because consensus on how to measure the output from higher education activities is lacking, e.g., acquired knowledge as an output of instruction, cost analysts measure the cost of the process that provides the opportunity to acquire knowledge.

Information acquired through cost analysis can assist managers in improving internal functions of institutions such as planning, budgeting, controlling, and evaluating.

When information from cost analysis is intended for interinstitutional comparison, an understanding of both the methodological and functional differences affecting comparability among the institutions is required. Methodological differences result from costing procedures that vary from one institution to another, whereas, functional differences result primarily from differences in academic programs and related support activities (Table 7). When comparing cost information among institutions, methodological differences are reconciled in an attempt to eliminate cost determination differences and functional differences are evaluated and explained. The critical factor involved in an interinstitutional cost study is a consistent methodology and an explanation or analysis of cost variations among institutions, including recognition of the functional differences of the institutions (Hughes and Topping, 1977).

When analyzing the cost of medical education, the costing method must take into account that medical schools are responsible for activities in addition to teaching and that the primary missions among the schools that are being compared may differ. For example, the allocation of salaries, the largest item of expense, is complicated because many of the faculty's activities are interrelated and overlapping; it is possible for a person to be involved with more than one activity at a time. Since it is possible for faculty members to teach, collect information for research, and care for patients simultaneously, salaries are distributed to activities by systematically estimating the percentage of salaried effort which each faculty contributes to each activity. This is accomplished through the completion of faculty activity reports.

TABLE 7

**INTERINSTITUTIONAL COST ANALYSIS COMPARISON:
METHODOLOGICAL AND FUNCTIONAL DIFFERENCES**

METHODOLOGICAL DIFFERENCES IN INTERINSTITUTIONAL COMPARISON

- The judgements exercised in collecting, estimating, and allocating costs differ, since they often depend on the interpretation of complex situations and on the unique characteristics of individual institutions.
- The definition of direct and indirect costs can be different from institution to institution because of management's ability to identify costs as direct or because decisions made by management influence how direct costs are defined.
- The methods or procedures used to accumulate and analyze costs may differ from institution to institution, especially in the case of assessing and assigning costs to faculty effort.

FUNCTIONAL DIFFERENCES IN INTERINSTITUTIONAL COMPARISON

- Missions, goals, and objectives differ among institutions.
- Quality, effectiveness, and delivery of the educational process differ.
- Organizational structure, activities, and units of service cost differ.
- Constituents served by institutions have different needs and therefore require different services and support.
- Different geographic locations of institutions cause costs for similar items to vary.
- Distinct differences exist between those institutions that are well established and those that are developing.
- Economies of scale may vary.
- Variations in costs occur because of differences in availability of revenues for funding programs.

Source: Hughes, S. K., and Topping, J.R. (1977). Procedures for Determining Historical Full Costs, 2nd edition, NCHEMS and NACUBO.

While the distribution of total expenditures based on faculty effort is the accepted method to analyze the cost of medical education, its limitations beyond the methodological and functional differences (Table 7) are also recognized. For example, the method is weakened by the subjectivity of the faculty's estimation of percentage of effort. In addition, increases in research and practice plan operations drive the cost of instruction and cost per student upward despite the fact that the instruction operation may not change.

Summary

An examination of funding trends and patterns in other states suggests that history and tradition play an important role in determining funding for individual institutions and that no clear advantage appears to lie in one funding pattern over another. Currently, efforts to link funding to state priorities reflect an increased interest in outcomes and assessment.

When analysis shifts from the state level to program funding and costs, a complex array

of factors complicate interinstitutional comparisons. With all the possible funding and cost factor combinations, it is unlikely that any two medical schools are alike even when they are located in the same state. Although designing a cost methodology to provide consistent analysis of funding and expenditures across institutions with varied cost factor combinations has been attempted, available designs are significantly limited. Comparison remains dependent upon understanding the impact of the factors influencing revenues and costs.

IV. STUDY DESIGN AND FINDINGS

Proviso language accompanying Specific Appropriation 577A of the 1991 Legislature directed the Commission to study funding and costs of medical, dental, and veterinary education in Florida. The Commission was directed by the 1991 Legislature to use the cost accounting procedure which was developed by the Board of Regents as a result of proviso language in the 1985 and 1986 General Appropriations Act. In addition, proviso language directed the Commission to expand or revise this cost accounting procedure, in consultation with the Office of the Auditor General, as required to implement the provisions of the study. Upon discussion with legislative staff, two elements of the study were identified as beyond the scope of the previous design of the study coordinated by the Board of Regents in the 1987 report. First, the proviso requested an analysis of the various activities or cost objectives which are funded by the college and fund source. Second, the Legislature expressed interest in examining funding and expenditures by cost objectives annually. Information from the Annual Financial Questionnaire that is prepared by each medical school annually for the Liaison Committee on Education of the Association of American Medical Colleges was utilized to address these two elements.

Chapter IV reviews the design of the current study to incorporate proviso and legislative requests for information and study findings. The limitations of the study design and analysis are detailed in the following descriptions and in Chapter III. Comparison of findings among the schools of medicine, dentistry, and veterinary medicine is meaningful only when the factors affecting funding and costs are understood for each program.

Cost Study Design

When initiating this study, Commission staff met with representatives from the three medical schools, Board of Regents Office of Health Affairs, Office of the Auditor General, legislative staff, and Dr. J. Kent Caruthers, a representative of MGT of America, Inc., who was contracted to provide technical assistance to the Commission. These interested parties concurred upon the following parameters. First, the fiscal year of 1989-90 would serve as the base year for fiscal, faculty, and student data. Second, the study coordinated by the Board of Regents that produced the 1987 report, *Cost of Medical Education*, would be replicated. Third, the primary focus of the study would be on medical education with information on dental and veterinary medicine supplementing when available. Commission staff requested Dr. Caruthers to assist in addressing legislative interest in analyzing expenditures of cost activities by fund source and providing a means for on-going fiscal analysis of costs and funding. The representative from the Office of the Auditor General provided additional technical assistance and reviewed draft reports, the methodological design, and study findings.

Review of Replicated Study

Following the recommendations in the Commission's 1985 report on medical education, proviso in the 1985 and 1986 General Appropriations Acts directed the Board of Regents in consultation with the University of Miami and the Postsecondary Education Planning Commission to develop a cost accounting procedure capable of producing comparable data on the costs of medical education for the two public medical schools and the first accredited medical school. In January 1986, the Board of Regents Office of Health Affairs assembled

the Medical Education Cost Study Committee for the purpose of developing a system to identify the cost of medical education at the University of Florida, the University of South Florida, and the University of Miami. Committee members included representatives from the Office of Health Affairs and each of the allopathic medical schools in Florida. The committee devised a reporting process for submitting the cost data following nationally-recognized medical school costing methodology. Categories identified for reporting data were segmented into activity structure, source of funds structure, and allocation methodologies. Further refinements in the reporting process were made to ensure uniformity prior to the submission of cost data for the 1986 Legislative Session.

When considering an analysis of the cost of medical education, the report, *Cost of Medical Education* (1987), cautions that besides providing undergraduate education, medical schools are responsible for other activities and that the primary missions among the schools differ, and, consequently, faculty efforts in medical school activities show dissimilarities at certain periods of time. According to the 1987 report,

when the Federal Government was infusing dollars into medical education, a greater percentage of faculty effort was earmarked for undergraduate education. But once the federal financial support lessened, faculty efforts turned toward increased reliance on medical practice plans and research. By contrast, the sources of funds among the three medical schools are showing consistent trends; and while the percentage of state general revenue is relatively declining, the percentage of medical practice plan income is rising. Not only is this trend characteristic among Florida medical schools, but it is also prevalent among medical schools nationwide.

The basic element used in medical education cost analysis and in the 1987 study is the faculty activity report in which each faculty member reports the effort or average time spent on particular activities. Individual faculty activity reports are aggregated at the departmental or college level. All expenditures are then allocated on the basis of the aggregate of the faculty effort. This process does not identify the proportion of funds from each source for each expenditure category.

Each of the three medical schools prepared faculty effort reports through this process for the 1987 report. Total estimated expenditures for 1984-85 and 1985-86 were allocated on the basis of the faculty effort at each school. The percentages of total estimated expenditures allocated to M.D. instruction were 13.59 and 14.01 percent for the University of Miami, 13.30 and 11.00 percent for the University of Florida, and 21.97 and 20.74 percent for the University of South Florida for 1984-85 and 1985-86 (Appendix B).

Conducting a faculty activity report in which each faculty member participates is a time consuming process. An alternative approach is to request activity reports from department chairs and division chiefs in which faculty effort is estimated for faculty in their areas. In light of the time constraints of this current study, the medical schools, the Office of the Auditor General, the consultant with whom the Commission had contracted for this study, and the Commission agreed to use the 1985-86 data as a base for the faculty activity reports which would receive review and adjustment from the schools' deans and directors according to changes which occurred between 1985-86 and 1989-90.

Steps in Cost Analysis Methods Adapted for the Commission's Study

Cost analysis methods for higher education adapted for use in this current study involve the following simplified steps.

Step 1: Definitions and Cost Centers. *An attempt was made to reconcile the organizational and funding differences at each medical school and common definitions were agreed upon for the cost centers, sources of funds, and time period for analysis.*

Step 2: Faculty Activity Reports. *Faculty activity reports identified time spent in each activity area, e.g., instruction of medical students, service, research, and other instruction, for all medical school faculty. Activity reports from the previous study were reviewed and adjusted by department chairs and division chiefs for the faculty at each school.*

Step 3: Cost Analysis for Instruction. *Instructional costs were computed by applying the proportion of faculty time spent teaching medical students to all direct and indirect expenses incurred by the medical schools.*

Step 4: Average Cost per Student. *The average cost per student was calculated by dividing the instructional costs computed in Step 3 by the number of medical students.*

Step 5: Interpretation of Results. *Institutional data reports are provided in Appendix C. The analysis of historical-cost information offered in Chapter IV provides a perspective on the past allocation and use of resources by identifying patterns in cost trends over time or differences among the medical schools within the same time period. Identification of factors that influence cost variations, e.g., number of students enrolled, faculty salaries, and the age of schools, is at*

least as valuable as determining cost per student. (Adapted from Gamso, 1978)

Review of Procedure Use to Analyze Expenditures by Fund Source

In addition to the above steps, analysis of expenditures by fund source was made by the Commission's consultant. By using data reported in the Annual Medical School Questionnaire prepared by each medical school for the Liaison Committee on Medical Education, source - use matrices were designed for each school presenting estimated expenditures in both dollar amounts and percentages of the total funds expended (Appendix D).

The Liaison Committee on Medical Education relies exclusively on the Annual Financial Questionnaire (AFQ) for its financial data base in accreditation proceedings. According to its instruction guidelines, the purpose of the Annual Financial Questionnaire is to:

determine, as accurately as possible, total revenues and expenditures for medical school activities and the sources which support them. The data are used primarily to (1) generate aggregate annual reports, (2) track national trends, (3) compare individual schools in selected areas, and (4) satisfy LCME accreditation requirements regarding financial stability.

The AAMC defines a medical school in terms of the activities of its faculty: instruction, research, and patient care. This definition applies whether the activities occur within the walls of the medical school or at an external institution affiliated with it....The AFQ follows the principles of financial accounting and reporting found in the most recent edition of College and University Business Administration (CUBA). (p.1)

The AFQ provides the most comprehensive financial data available for schools of medicine, both on an individual and national basis. Representatives from the three medical schools in Florida objected to the use of AFQ data in source - use matrices, however, due to inherent problems with the data concerning expenditures. As expressed in letters responding to an early draft of the consultant's report, the medical schools' representatives stated that expense data more accurately portray accounting records rather than programmatic costs (Appendix C). On the other hand, they stated that the revenue data presented in the AFQ accurately depict the level and sources of medical schools' revenues.

Cost Study Findings

Each medical, dental, and veterinary school submitted data to the Commission according to the parameters set in the initial phase of the study, i.e., using 1989-90 data and adjusting previous faculty activities reports according to changes in their programs (Appendix C). In addition, each medical school submitted copies of its 1989-90 Annual Medical School Questionnaire prepared for the Liaison Committee on Medical Education of the Association of American Medical Colleges from which information was drawn for the consultant's report (Appendix D). Explanations of the differences between the two sources of data are included in the consultant's report.

Table 8 reveals a number of differences among the schools for 1989-90 and changes since 1984-85 and 1985-86 which reflect the impact of the factors that affect funding and costs (described in Chapter III). For example, in 1989-90, the percentage of direct expenditures spent instructing undergraduate (M.D.) students is highest at the University of South Florida, the school which places the highest emphasis on instruction in its mission.

The highest estimated expenditures per M.D. student and the largest total budget are reported at the University of Miami, the school which emphasizes research and tertiary care in its mission.

Between the years of 1984-85 and 1989-90, the data reflect both national trends and changes that occur as schools age. For example; all three programs indicated a decrease in the percentage of direct expenditures for instruction of the undergraduate (M.D.) student and an increase in the dollar amount per student and the total budget. The greatest decrease in the percentage of direct expenditures for M.D. instruction to total expenditures between 1984-85 and 1989-90 (30.6 percent) occurred at the University of South Florida, the youngest institution and therefore, the one most likely to change (Table 8). Whereas, not as great decreases occurred at the well-established schools (20.2 percent at the University of Miami and 24.0 percent at the University of Florida). Table 8 also displays the percentage of direct expenditures for M.D. instruction to primary program expenditures (instruction, research, service, and practice plan). The difference between total expenditures and primary program expenditures is attributed to the allocation of support services expenditures. The data reveal the impact of factors that influence funding and costs such as the schools' missions, size of programs, age of programs, and administrative decisions.

The University of Florida reported similar data for the College of Dentistry and the College of Veterinary Medicine. No longitudinal data exist for comparison. Table 9 displays this data for 1989-90.

TABLE 8
COMPARISON OF EXPENDITURES AND TOTAL BUDGETS
FOR FLORIDA'S ALLOPATHIC MEDICINE PROGRAMS
1984-85, 1985-86, and 1989-90

<u>University of Miami</u>	<u>1984-85</u>	<u>1985-86</u>	<u>1989-90</u>
Percentage of Direct Expenditures for MD Instruction (Total, Estimated Expenditures)	13.59%	14.01%	10.92%
Percentage of Direct Expenditures for MD Instruction (Total, Primary Programs)	16.30%	16.30%	13.00%
Estimated Expenditures per MD Student*	\$37,200	\$41,100	\$64,800
Total Budget (in millions)	\$142.29M	\$154.32M	\$220.13M
<u>University of Florida</u>			
Percentage of Direct Expenditures for MD Instruction (Total, Estimated Expenditures)	13.30%	11.00%	10.11%
Percentage of Direct Expenditures for MD Instruction (Total, Primary Programs)	16.13%	13.81%	12.76%
Estimated Expenditures per MD Student*	\$34,900	\$32,400	\$56,400
Total Budget (in millions)	\$92.57M	\$102.11M	\$178.08M
<u>University of South Florida</u>			
Percentage of Direct Expenditures for MD Instruction (Total, Estimated Expenditures)	21.97%	20.74%	15.24%
Percentage of Direct Expenditures for MD Instruction (Total, Primary Programs)	25.16%	23.61%	17.93%
Estimated Expenditures per MD Student*	\$27,300	\$30,100	\$54,700
Total Budget (in millions)	\$41.03M	\$46.82M	\$116.13M

*Rounded to nearest hundred

Sources: Board of Regents, *Cost of Medical Education*, 1987; and Institutional Reports, 1991.

TABLE 9
COST OF DENTAL AND VETERINARY EDUCATION IN FLORIDA
1989-90

UNIVERSITY OF FLORIDA	COLLEGE OF DENTISTRY	COLLEGE OF VETERINARY MEDICINE
Percentage of Direct Expenditures per Professional Degree Student	44.45%	27.32%
Estimated Expenditures/Professional Degree Student*	\$48,400	\$38,200
Total Budget (in Millions)	\$25.34M	\$30.85M

*Rounded to nearest hundred

Source: Institutional Reports, 1991.

Funding Considerations for Florida Medical Schools

The three medical schools in Florida demonstrate examples of institutions with different funding and cost factor combinations. Difficulties in comparisons among the institutions relate to the factors described in Chapter III. For example, of the two older medical schools, the University of Miami is an independent institution, whereas the University of Florida is public. Of the two public institutions, the University of South Florida is younger than the University of Florida and has fewer students enrolled. Table 10 displays a number of cost factors that have been discussed for the three medical schools in Florida including the year of their charter classes, independent or public sponsorship, first-year enrollment capacity, mission emphasis, and sources of funding.

Although Table 10 presents merely a simplified comparison of the medical schools in the State, some general statements concerning institutional characteristics and dependency on funding sources can be made. For example, the University of South Florida College of Medicine has the youngest and smallest of the three medical schools. The

emphasis of its mission statement is on providing for the education of students and professionals. Compared to the other two schools, revenues are less dependent on grants and contracts and the medical practice plan and more dependent on state funds. Unrestricted adjusted state funds account for 29.6 percent of total revenues.

The University of Florida College of Medicine was the second medical school founded in the State. It has fewer students than the University of Miami and more students than the University of South Florida. The emphasis of its mission statement is on promoting the health of the public, and its objectives suggest that its mission will be accomplished through a balance of teaching, research, and service.

Revenues for the University of Florida reflect this mission. Compared to the other public institution, the University of South Florida, the University of Florida's revenues are more dependent on contracts and grants and the medical practice plan and less dependent on state funds. Unrestricted adjusted state funds account for 19.4 percent of total revenues.

TABLE 10

**A COMPARISON OF COST AND FUNDING FACTORS FOR THE
ALLOPATHIC MEDICAL SCHOOLS IN FLORIDA
1989-90**

FACTORS	UNIVERSITY OF MIAMI	UNIVERSITY OF FLORIDA	UNIVERSITY OF SOUTH FLORIDA
Year - Charter Class	1952	1956	1971
Sponsorship	Independent	Public	Public
Mission Emphasis	emphasis on research and development of clinical potential	to promote the health of the public	to provide for the education of students and professionals
Capacity - 1st Year Class	140	115	96
Grants and Contracts (Direct)	\$63,902,818	\$38,555,823	\$24,472,878
(State Grants and Contracts)	(\$13,237,828)	(\$10,249,857)	(\$2,382,142)
Medical Practice Plan Revenues	\$110,444,270	\$107,743,990	\$65,168,104
Unrestricted Adjusted State Funds	\$13,022,647	\$45,249,990	\$40,919,645
Total Current Funds Revenue	\$264,691,753	\$233,640,103	\$138,286,224
State Unrestricted Funds As Percent of Total Funds	4.9%	19.4%	29.6%

Source: Institutional Reports; and Liaison Committee on Medical Education, Annual Medical School Questionnaires, 1989-90.

The State's only independent allopathic medical school, the University of Miami, is the oldest medical institution in Florida and enrolls the largest class of students. Its mission statement emphasizes research and the development of clinical services. Revenues from contracts and grants and the medical practice plan exceed those in the public medical schools, as do total revenues. State funds, received as a capitation appropriation to the First Accredited Medical School, account for 4.9 percent of total revenues. The University of Miami receives more contract and grant funds from the State (\$13.2 million) than the public medical schools (\$10.2 million for the University of Florida and \$2.4 million for the University of South Florida).

Analysis of Expenditures by Fund Source

The consultant's report (Appendix D) displays data from the institutional reports replicating the previous study and the Annual Medical School Questionnaire for 1989-90 prepared by each school for the Liaison Committee on Education. The data are displayed in source-use matrices for each school in both dollar amounts and as a percentage distribution of total recorded expenditures, thus enhancing a comparison of the three schools and budgets of different sizes. The consultant's report notes differences among the schools' budgets. Such differences reflect organizational, programmatic, and accounting practices variations and inhibit fiscal comparisons. The

consultant's report observed that M.D. instruction is only one of several important activities being funded by the State at the three medical schools. In addition, the report reminds the reader that the cost per student data are known to be only estimates. The consultant's report concludes that the data submitted to the Liaison Committee on Medical Education is by far more comprehensive and informative for on-going state-level monitoring of program activity than the data generated by replicating the design of the former study.

As stated in the description of the study design, representatives from the medical schools objected to the use of LCME data stating the expense data did not represent programmatic costs. Letters responding to an earlier draft by the consultant are included in Appendix C.

Review by the Office of the Auditor General

The representative from the Office of the Auditor General reviewed the study methodology, data reports, consultant's report, and study finding. The representative prepared a report summarizing the review and presented the findings of the review to the Program Committee (Appendix E).

The report clarified the role the Office of the Auditor General in this study and issued caveats that the office was not involved in the earlier study when the methodology was designed and that the office did not perform an audit or a compilation, as defined by generally accepted auditing standards. The office reviewed the data as they were submitted, looked at the methodology and rationale of how data were used, and verified the mathematical accuracy of the data.

The auditor general's report concurred that reporting expenditures by fund source is a

difficult task in that cost accounting systems do not typically provide this information other than for restricted grant funds. Three issues concerning the quality of the data provided by the universities were cited: the use of faculty activity reports to distribute direct and indirect costs to the various medical school activities, the timeliness of the faculty activity reports, and the effect, if any, on comparability of the cost of medical education between the medical schools because of the exclusions of certain costs from the data reports that were otherwise included on the LCME report. Although faculty activity reports are a recognized method of allocating costs, they represent a subjective measure. In this study, their subjectivity was compounded by using the faculty activity reports from the previous study and relying on the deans and directors to review and update them according to changes in the past several year.

Summary

In 1991, the Association of American Medical Colleges reported that data compiled nationally from the 1989-90 Annual Financial Questionnaire reveal that unrestricted state appropriations continued to be a very important source of funds for public schools, providing 25 percent of their total revenues in 1989-90. In contrast, unrestricted state appropriations to private medical schools nationally accounted for only 1.7 percent of revenues in 1989-90. In comparison, unrestricted state appropriations in Florida contributed 4.9 percent to total revenues at the University of Miami medical school and 19.4 and 29.6 percent to the University of Florida and University of South Florida medical schools, respectively, in 1989-90.

Although expense data from the Annual Financial Questionnaire more accurately represents accounting records than programmatic costs, the information contained in the Annual Financial Questionnaire

provides the most accurate fiscal data available on individual medical schools, schools characterized as public or private, and total schools nationally. The data lend themselves to comparisons with other institutions, individually and nationally, as well as longitudinal comparisons for one medical school. Aggregate data are published annually by the Association of American Medical Colleges and further statistical analysis relating to a particular concern may be purchased from the Association.

V. ISSUES AND RECOMMENDATIONS

In response to proviso language in the 1991 General Appropriations Act, the Commission reviewed funding and costs for medical, dental, and veterinary education in Florida. The review included replicating the methodology designed for the 1987 report, *Cost of Medical Education*, prepared by the Board of Regents Office of Health Affairs and the three medical schools, and analyzing institutional data from the Annual Financial Questionnaire, prepared by each institution for the Liaison Committee on Medical Education of the Association of American Medical Colleges. When analyzing the cost of medical education, the costing method must take into account that medical schools are responsible for a complex array of activities in addition to teaching and that the primary missions may differ among the schools being compared. For this study, funding and expenditures were viewed in context of the history of educational programs, characteristics of students in and graduates of the State's programs, characteristics of the labor market, funding trends and patterns in other states, and factors affecting the funding and costs of medical education. The following sections focus on two issue areas related to state oversight of medical education and funding to promote state priorities for medical education.

State Oversight

The funding and operation of medical centers and schools are complicated by the integration of their missions (teaching, research, and service) and the combination of varied cost factors (e.g., mission emphasis, size, age, location, and relationships with the state and hospitals). The University of Miami School of Medicine receives state funds for Florida students as provided for in Section 242.62, Florida Statutes, concerning the First Accredited Medical School. By statute, these funds are restricted to the operation and

maintenance of a medical school and for medical research. The health and medical centers at the University of Florida and the University of South Florida receive lump sum appropriations from the State. These public institutions designate funds for each college and budget item at the centers without restrictions from the State.

Independent colleges and institutions, as well as public institutions, are responsible to the State for the proper fiscal accounting of all state funds received and for fulfilling all contractual agreements. Despite recognition of the University of Miami's independent status and the funding and operation complexities encountered by all three institutions, the State is concerned with the demonstration of accountability for these funds. No methodology has been developed to accurately measure the exact cost of medical education or the cost per student. Methodologies that have been used to measure costs merely produce estimates, while consuming large quantities of time and effort.

For example, the methodology for this study was designed to address legislative proviso and included two sources of data. The first set of data was obtained by replicating the cost methodology developed through the coordination efforts of the Board of Regents Office of Health Affairs in 1987. Replicating the previous study provided information on the cost per student and financial analysis of sources of funds and expenditures over a period of years. The strength of replicating the previous methodology lies in three areas: the cost per student for each program could be estimated, consistent costing procedures were agreed upon by all three medical schools, and the findings from data collected in 1989-90 are comparable to findings from data collected in 1984-85 and 1985-86. On the other hand, the findings are merely estimates of the

proportion of all medical school expenditures. The accuracy of the estimates is limited in that the proportion of expenditures allocated to instruction of medical students is determined by a composite of faculty activity reports, a highly subjective measure. An additional limitation in this costing methodology beyond the subjectivity of faculty activity reports lies in the inclusion of expenditures for all of the activities of the medical school. Therefore, when expenditures on research projects or with the faculty practice plan increase, so does the estimated cost to instruct a medical student.

The second set of data used to analyze funding and expenditures in this study was the Annual Financial Questionnaire prepared by each medical school for the Liaison Committee on Medical Education (LCME), the accrediting body of the Association of American Medical Colleges. The LCME states that the purpose of the Annual Financial Questionnaire is to determine, as accurately as possible, total revenues and expenditures for medical school activities and sources which support them. LCME uses the data to generate aggregate annual reports, track national trends, compare individual schools in selected areas, and to satisfy LCME accreditation requirements regarding financial stability. In this study, data from the Annual Financial Questionnaire were used to address legislative interest in connecting expenditures to funding sources for each of the medical schools in the State. There are a number of advantages in analyzing data from the Annual Financial Questionnaire: accurate revenue data are provided; the process for collecting data has been in place for many years and yields data for longitudinal, interinstitutional, and national comparisons; and the data are already being reported to an external body, consequently requiring minimal cost in time and financial expense to the medical schools to submit copies to the Board of Regents Office of Health Affairs for state-level review. The

Annual Financial Questionnaire provides accurate accounting of medical schools' revenues, however, expenditure data reported on the questionnaire more accurately portray accounting records than true programmatic costs.

Upon weighing the advantages and limitations of both sources of data, the replicated cost methodology and the Annual Financial Questionnaire, the Commission believes that the data contained in the Annual Financial Questionnaire are more beneficial for ongoing, state-level review by policymakers because of the accuracy of revenue data; comparability for longitudinal analysis, to other institutions, and to medical schools nationally; and availability for state-level review at minimal cost.

Recommendation:

1. The University of Florida Health Center, University of South Florida Medical Center, and University of Miami School of Medicine should annually submit copies of the Liaison Committee on Medical Education's Annual Medical School Financial Questionnaire to the Board of Regents Office of Health Affairs. The Office of Health Affairs should maintain and provide access to these annual reports. Due to the limitations summarized above, the Annual Financial Questionnaire cannot be utilized to determine a valid cost per student, and the expenditure data more accurately represent accounting records than true programmatic costs. The Annual Financial Questionnaire, however, contains accurate revenue data and information for longitudinal and interinstitutional comparison and is available at minimal cost to the medical schools and the State.

Funding for State Priorities

There are expectations by the State that programs receiving public funds will

contribute to achieving goals of the State. In the case of medical, dental, and veterinary education programs, the expectation is that these programs will contribute to the provision of quality health care within the State. To better serve the health care needs of a culturally diverse population, Florida is interested in increasing the number and percentage of women and minorities, who, having completed their M.D. degrees from medical education programs in Florida, choose residencies in Florida and establish practices in the State. To better serve the health care needs of citizens of Florida residing in rural and low economic areas, the State is interested in increasing the number and percentage of M.D. graduates, who, having completed their degrees from medical education programs in Florida, choose primary care residencies and establish primary care practices in rural and low economic areas of the State.

Enhancement funding can be used to support issues identified with priority state goals. Institutions could receive enhancement funding for reaching or exceeding specified goals. Incentive funding could be considered for institutions that meet or exceed state goals for increasing the number and percentage of women and minorities in medicine, increasing the number and percentage of graduates choosing primary care residencies and establishing primary care practices in the State, or increasing health care to underserved areas of the State. Such funding arrangements are currently being developed in Texas by the Texas Higher Education Coordinating Board at the request of the legislature.

While enhancement funding is a mechanism the State may use that focuses on medical schools addressing state priorities, other programs attempt to address state priorities by focusing on individual physicians. For example, the Department of Health and Rehabilitative Services Health Manpower Program currently coordinates the state and

federal loan repayment programs which encourage physicians to practice in underserved areas of the State. The 1991 Legislature appropriated \$115,000 to Florida's Medical Education Reimbursement and Loan Repayment Program which, along with matching federal funds, supports 10 physicians in rural areas. In addition, Florida qualifies for 65 physicians to participate in the federal loan repayment program, the National Health Service Corps Program, for 1991-92. These loan repayment programs have been effective in attracting physicians to rural and low economic areas and, therefore, contribute to the provision of quality health care within the State.

Recommendations:

2. The medical schools in Florida, the Board of Regents Office of Health Affairs, and the Legislature should develop incentive funding formulas that clearly link additional public funds to one or both of the following objectives: increasing the number and percentage of women and minorities, who, having graduated from medical schools in Florida, choose residencies in Florida and establish practices in the State; and, increasing the number and percentage of graduates from medical schools in Florida who choose primary care residencies in Florida and establish primary care practices in underserved areas of the State.

3. The State should continue to support the state funded Medical Education Reimbursement and Loan Repayment Program and the Department of Health and Rehabilitative Services Health Manpower Program's efforts to place primary care physicians in medically underserved areas of the State.

Summary

The analysis conducted during this study enhanced understanding of both the funding and costs of medical, dental, and veterinary education, as well as the limitations of interinstitutional financial data comparison. The Annual Financial Questionnaire was found to contain the most informative and comparable data available concerning the finances of medical schools. While analysis did not lead to recommendations concerning funding variations present at the three allopathic medical schools in Florida, it provided for the most informative data source for state oversight and for recognition of the need for increased links between state funds and state priorities.

Appendix A

COMPARISON OF TUITION LEVELS

COMPARISON OF TUITION LEVELS

Tuition represents another increasing source of funds for medical, dental, and veterinary education since the loss of federal support during the early 1980s. The following sections provide a brief history of tuition levels in Florida and a comparison to tuition levels and averages in member states of the Southern Regional Education Board and nationally. Any comparison of tuition levels is limited, however, by differences in the history of tuition policy for each state, the wide range of tuition levels across the states, and the independence of tuition levels from the cost of education.

Tuition Rates in Florida

The Commission's 1985 report, *Medical Education in Florida*, reviewed tuition levels for students in medical education programs and compared tuition to instructional costs. The comparison found that tuition in Florida's public programs accounted for approximately eight percent of the instructional costs in 1985-86. The Commission recommended that tuition and fees at the public medical schools in Florida be increased to represent approximately 13 percent of the costs of instruction. An increase to 13 percent of the costs would bring Florida tuition in line with that of other large states and bring the percentage of costs borne by medical students closer to that borne by undergraduates.

In 1988, the *Comprehensive Health Professions Plan Review for Florida* reported that annual tuition for Florida residents at public medical schools increased 29.7 percent over the 1986-87 level to \$4,350 in 1987-88; nonresident students paid \$11,049. The tuition level for 1987-88 represented approximately 10 percent of the cost of instruction. Increases in tuition levels for dental and veterinary medical education were also instituted following the 1984 recommendation for medical education. By 1990-91, tuition rates for Florida residents enrolled in the public medical and dental schools increased to \$5,860 and to \$4,953 in the veterinary medical school and to \$14,904 and \$12,549, respectively, for nonresident students. The 1991 Legislature approved 15 percent increases for resident student tuition and 25 percent increases for nonresident students for 1991-92 (\$6,210 for medical and dental schools and \$5,217 for the veterinary medical school for resident, and \$16,976 and \$14,260 for nonresident students). Table A-1 provides the recent tuition levels for Florida's public programs in medicine, dentistry, and veterinary medicine.

Since 1985-86, tuition in Florida's public programs have increased as a proportion of cost of undergraduate and graduate instruction. State University System staff report that resident tuition in 1991-92 is estimated to account for approximately 22.86 percent and 18.00 percent of the cost of instruction for undergraduate and graduate students, respectively. Nonresident tuition in 1991-92 is estimated to account for approximately 116.3 percent and 69.04 percent of the cost of instruction for nonresident undergraduate and graduate students. These estimates are based on the most recent expenditure analysis of related instructional costs which was calculated with 1989-90 data. From the 1989-90 expenditure analysis, projections were made according to changes to the total budget and to changes in the number of credit hours. Not all costs are included in these analyses; for example, the costs for new construction and depreciation of buildings are not included. The estimates are made for programs receiving Education and

General funds and not for programs in the health centers or the Institute of Food and Agricultural Sciences.

TABLE A-1

**TUITION RATES FOR FLORIDA'S PUBLIC PROGRAMS
IN MEDICINE, DENTISTRY, AND VETERINARY MEDICINE**

	MEDICINE		DENTISTRY		VETERINARY MEDICINE	
	RESIDENT	NONRESIDENT	RESIDENT	NONRESIDENT	RESIDENT	NONRESIDENT
1984-85	2,360	5,767	2,360	5,767	2,360	5,767
1987-88	4,350	11,049	4,350	11,049	4,350	11,049
1988-89	4,390	11,089	4,390	11,089	4,390	11,089
1989-90	4,726	11,961	4,726	11,961	4,726	11,961
1990-91	5,860	14,904	5,860	14,904	4,953	12,549
1991-92	6,210	16,976	6,210	16,976	5,217	14,260

Sources: State University System Fact Books and Communication with SUS Staff.

Tuition levels at the University of Miami also increased since the early 1980s when federal support was withdrawn. For example, in 1981-82, tuition at the University of Miami was \$7,540. Currently in 1991-92, tuition at the University of Miami is \$18,950.

Tuition and Fees Levels in SREB States

Among the member states of the Southern Regional Education Board, there are 31 allopathic and four osteopathic schools of medicine, 18 schools of dentistry, and 11 schools of veterinary medicine. These schools of medicine, dentistry, and veterinary medicine are listed on Tables A-2, A-3, and A-4. The tables include degrees offered by each school, their status as public or independent institutions, and resident and nonresident tuition levels for 1990-91. Table A-5 provides average tuition levels and tuition ranges by public or independent status and by degree program for 1990-91.

When comparing 1990-91 tuition and fees levels for public programs, both resident and nonresident, tuition levels at Florida's public programs are above SREB averages with the exception of nonresident tuition levels in Florida's public allopathic medical programs which are below average (Table A-5). Of the 29 SREB allopathic schools of medicine, resident tuition and fees rank sixth at USF and ninth at UF in 1990-91. For nonresident levels, USF and UF rank tenth and eleventh in 1990-91. Resident and nonresident tuition levels for the University of Miami's School of Medicine are above SREB averages for independent allopathic medical schools. Southeastern University of Health Sciences has the only independent school of osteopathic medicine in the SREB states.

TABLE A-2

**SCHOOLS OF MEDICINE AND OSTEOPATHY IN SREB STATES
1990-91**

STATE	MEDICAL SCHOOL	CITY	DEGREE	PUBLIC/ NONPUBLICT	TUITION & FEES	
					RESIDENT	NONRESIDENT
AL	University of Alabama School of Medicine	Birmingham	MD	P	\$5,617	\$14,765
AL	University of South Alabama College of Medicine	Mobile	MD	P	\$6,329	\$11,609
AR	University of Arkansas College of Medicine	Little Rock	MD	P	\$6,070	\$11,790
FL	Southeastern College of Osteopathy Medicine	North Miami Beach	DO	I	\$11,965	\$15,965
FL	University of Florida College of Medicine	Gainesville	MD	P	\$6,258	\$15,301
FL	University of Miami School of Medicine	Miami	MD	I	\$18,100	\$18,100
FL	University of South Florida College of Medicine	Tampa	MD	P	\$6,381	\$15,424
GA	Emory University School of Medicine	Atlanta	MD	I	\$14,802	\$14,802
GA	Medical College of Georgia	Augusta	MD	P	\$4,169	\$12,053
GA	Mercer University School of Medicine	Macon	MD	I	\$14,406	\$14,406
GA	Morehouse School of Medicine	Atlanta	MD	I	\$13,910	\$13,910
KY	University of Kentucky College of Medicine	Lexington	MD	P	\$5,130	\$17,279
KY	University of Louisville School of Medicine	Louisville	MD	P	\$4,928	\$17,078
LA	Louisiana State University School of Medicine	New Orleans	MD	P	\$4,776	\$12,576
LA	Louisiana State University Medical Center School of Medicine	Shreveport	MD	P	\$4,776	\$12,576
LA	Tulane University School of Medicine	New Orleans	MD	I	\$23,000	\$23,000
MD	Johns Hopkins University School of Medicine	Baltimore	MD	I	\$18,405	\$18,405
MD	University of Maryland School of Medicine	Baltimore	MD	P	\$9,090	\$17,244
MS	University of Mississippi School of Medicine	Jackson	MD	P	\$6,115	\$12,115
NC	Bowman Gray School of Medicine (WFU)	Winston-Salem	MD	I	\$13,000	\$13,000
NC	Duke University School of Medical	Durham	MD	I	\$14,855	\$14,855
NC	East Carolina University School of Medicine	Greenville	MD	P	\$1,964	\$12,792

TABLE A-2 CONT'D.
SCHOOLS OF MEDICINE AND OSTEOPATHY IN SREB STATES
1990-91

STATE	MEDICAL SCHOOL	CITY	DEGREES	PUBLIC/ INDEPENDENT	TUITION & FEES	
					RESIDENT	NONRESIDENT
NC	University of North Carolina School of Medicine	Chapel Hill	MD	P	\$1,827	\$12,615
OK	Oklahoma State University School of Osteopathic Medicine	Tulsa	DO	P	\$5,240	\$12,710
OK	University of Oklahoma College of Medicine	Oklahoma City	MD	P	\$5,416	\$12,886
SC	Medical University of South Carolina College of Medicine	Charleston	MD	P	\$4,410	\$8,820
SC	University of South Carolina School of Medicine	Columbia	MD	P	\$4,800	\$11,000
TN	East Tennessee State University College of Medicine	Johnson City	MD	P	\$7,474	\$11,692
TN	Meharry Medical College	Nashville	MD	I	\$12,100	\$12,100
TN	University of Tennessee College of Medicine	Memphis	MD	P	\$7,377	\$11,597
TN	Vanderbilt University School of Medicine	Nashville	MD	I	\$15,455	\$15,455
TX	Baylor College of Medicine	Houston	MD	I	\$6,163	\$21,852
TX	Texas A & M University	College Station	MD	P	\$6,283	\$22,672
TX	Texas College of Osteopathic Medicine	Fort Worth	DO	P	\$5,463	\$21,852
TX	Texas Technical University School of Medicine	Lubbock	MD	P	\$5,972	\$22,361
TX	University of Texas School of Medicine	Houston	MD	P	\$5,713	\$22,102
TX	University of Texas School of Medicine	San Antonio	MD	P	\$5,713	\$22,102
TX	University of Texas Medical Branch	Galveston	MD	P	\$5,713	\$22,102
TX	University of Texas Southwestern Medical School	Dallas	MD	P	\$5,810	\$22,199
VA	Medical College of Hampton Roads	Norfolk	MD	I	\$11,386	\$17,886
VA	Medical College of Virginia	Richmond	MD	P	\$7,292	\$15,192
VA	University of Virginia School of Medicine	Charlottesville	MD	P	\$7,026	\$14,926
WV	Marshall University School of Medicine	Huntington	MD	P	\$5,554	\$9,964
WV	West Virginia School of Osteopathic Medicine	Lewisburg	DO	P	\$6,152	\$10,832
WV	West Virginia University School of Medicine	Morgantown	MD	P	\$5,455	\$9,865

Note: MD = Doctor of Medicine; DO = Doctor of Osteopathy.
Source: Southern Regional Education Board, 1991.

TABLE A-3
SCHOOLS OF DENTISTRY IN SREB STATES
1990-91

STATE	DENTAL SCHOOL	CITY	DEGREE	PUBLIC/ INDEPENDENT	TUITION & FEES	
					RESIDENT	NONRESIDENT
AL	University of Alabama School of Dentistry	Birmingham	DMD	P	\$4,011	\$7,062
FL	University of Florida College of Dentistry	Gainesville	DMD	P	\$6,258	\$15,302
GA	Medical College of Georgia School of Dentistry	Augusta	DMD	P	\$4,009	\$11,893
KY	University of Kentucky College of Dentistry	Lexington	DMD	P	\$4,320	\$15,899
KY	University of Louisville School of Dentistry	Louisville	DMD	P	\$4,230	\$15,810
LA	Louisiana State University School of Dentistry	New Orleans	DDS	P	\$3,736	\$8,336
MD	University of Maryland College of Dental Surgery	Baltimore	DDS	P	\$7,016	\$16,228
MS	University of Mississippi School of Dentistry	Jackson	DMD	P	\$4,135	\$6,135
NC	University of North Carolina School of Dentistry	Chapel Hill	DDS	P	\$2,882	\$16,793
OK	University of Oklahoma College of Dentistry	Oklahoma City	DDS	P	\$5,000	\$12,200
SC	Medical University of South Carolina College of Dental Medicine	Charleston	DMD	P	\$3,540	\$7,040
TN	Meharry Medical College School of Dentistry	Nashville	DDS	I	\$12,380	\$12,380
TN	University of Tennessee College of Dentistry	Memphis	DDS	P	\$4,838	\$9,058
TX	Baylor College of Dentistry	Dallas	DDS	I	\$4,551	\$18,084
TX	University of Texas Dental Branch	Houston	DDS	P	\$4,554	\$18,087
TX	University of Texas Health Science Center Dental School	San Antonio	DDS	P	\$4,727	\$18,260
VA	Virginia Commonwealth University School of Dentistry	Richmond	DDS	P	\$6,373	\$12,603
WV	West Virginia University School of Dentistry	Morgantown	DDS	P	\$4,537	\$9,641

Note: DDS = Doctor of Dental Surgery; DMD = Doctor of Dental Medicine.

Source: Southern Regional Education Board, 1991.

TABLE A-4
SCHOOLS OF VETERINARY MEDICINE IN SREB STATES
1990-91

STATE	VETERINARY MEDICAL SCHOOL	CITY	PUBLIC/ INDEPENDENT	TUITION & FEES	
				RESIDENT	NONRESIDENT
AL	Auburn University School of Veterinary Medicine	Auburn University	P	\$1,896	\$5,555
AL	Tuskegee Institute School School of Veterinary Medicine	Tuskegee	I	\$6,800	\$6,800
FL	University of Florida College of Veterinary Medicine	Gainesville	P	\$5,351	\$12,947
GA	University of Georgia College of Veterinary Medicine	Athens	P	\$2,600	\$8,500
LA	Louisiana State University College of Veterinary Medicine	Baton Rouge	P	\$3,380	\$11,730
MS	Mississippi State University College of Veterinary Medicine	Mississippi State	P	\$4,591	\$10,786
NC	North Carolina State University School of Veterinary Medicine	Raleigh	P	\$1,866	\$10,834
OK	Oklahoma State University College of Veterinary Medicine	Stillwater	P	\$1,927	\$5,237
TN	University of Tennessee College of Veterinary Medicine	Knoxville	P	\$3,376	\$6,640
TX	Texas A & M University College of Veterinary Medicine	College Station	P	\$4,800	NA
VA	VPI-VA/MD Regional College of Veterinary Medicine	Blacksburg	P	\$5,700	NA

Source: Southern Regional Education Board, 1991.

TABLE A-5
TUITION AND FEES IN SREB STATES: AVERAGE LEVELS AND RANGES
1990-91

PROGRAM	PUBLIC		INDEPENDENT	
	RESIDENT	NONRESIDENT	RESIDENT	NONRESIDENT
Allopathic Medicine (MD) Range	\$5,636 (\$1,827-\$9,090)	\$14,990 (\$8,820-\$22,672)	\$14,631 (\$6,163-\$23,000)	\$16,480 (\$12,100-\$23,000)
Osteopathic Medicine (DO) Range	\$5,618 (\$5,240-\$6,152)	\$14,905 (\$10,832-\$21,852)	\$11,965 --	\$15,965 --
Dentistry (DMD and DDS) Range	\$4,635 (\$2,882-\$7,016)	\$12,522 (\$6,135-\$18,260)	\$8,466 (\$4,551-\$12,380)	\$15,232 (\$12,380-\$18,084)
Veterinary Medicine Range	\$3,549 (\$1,866-\$5,700)	\$9,029 (\$5,237-\$12,947)	\$6,800 --	\$6,800 --

Note: Averages were computed based on 29 public MD programs, 12 independent MD programs, 3 public DO programs, one independent DO program, 16 public dentistry programs, two independent dentistry programs, 10 public veterinary programs, and one independent veterinary program.

Source: Southern Regional Education Board, 1991.

A comparison of tuition levels for Florida's public dental and veterinary programs with SREB programs reveals that both resident and nonresident tuition levels at the University of Florida are above regional averages in 1990-91 (Table A-5). Resident and nonresident tuition levels for the dental program at the University of Florida rank third and seventh among the 16 public SREB programs in 1990-91. Resident and nonresident tuition levels for the veterinary program at the University of Florida rank second and first among the 10 public SREB programs in 1990-91.

Tuition Levels for U.S. Medical Schools

Nationally, there are 73 public and 52 independent allopathic medical schools in 1990-91, and the ranges of their tuition and fees levels are approximately \$10,000 for residents and \$27,000 for nonresidents in public programs and \$17,500 in independent programs (Table A-6). When comparing tuition and fees for Florida public allopathic programs to the rest of the nation, levels in Florida may be characterized as average. Using data published by the Association of American Medical Colleges, tuition and fees at the University of South Florida are slightly above the national average of public allopathic programs and the level at the University of Florida is slightly below the national average in 1990-91 (Table A-6). Of the 73 public allopathic programs, the University of South Florida and the University of Florida rank thirtieth and thirty-fourth for resident tuition and fees in 1990-91. Tuition and fees at the University of Miami School of Medicine are slightly below the national average for independent allopathic programs.

When comparing Florida's public allopathic programs to the 32 programs in the ten largest states with public programs, the University of South Florida and the University of Florida rank thirteenth and fifteenth for resident tuition and fees and twelfth and fourteenth for nonresident levels in 1990-91 (Table A-7). The resident levels are above average by approximately \$300, and the nonresident levels are slightly above and below average for USF and UF respectively.

TABLE A-6
TUITION AND FEES FOR THE FIRST YEAR CLASS AT U.S. MEDICAL
SCHOOLS: AVERAGE LEVELS AND RANGES
1989-90 AND 1990-91

YEAR	PUBLIC		INDEPENDENT
	RESIDENT	NONRESIDENT	
1989-90			
Average	\$5,925	\$14,104	\$17,759
Range	\$1,620 - \$10,092	\$7,032 - \$33,640	\$9,498 - \$26,950
1990-91			
Average	\$6,272	\$14,932	\$18,786
Range	\$1,654 - \$11,415	\$8,045 - \$35,360	\$10,298 - \$27,780

Source: Association of American Medical Colleges, 1991.

TABLE A-7
PUBLIC MEDICAL SCHOOLS - TUITION AND FEES
FIRST YEAR MEDICAL STUDENTS, 1990-91
TEN LARGEST STATES

STATE AND SCHOOL	TUITION AND FEES	
	RESIDENT	NONRESIDENT
California		
University of California - Davis	\$2,374	\$8,790
- Irvine	2,656	9,072
- Los Angeles	2,129	8,045
- San Diego	2,497	8,913
- San Francisco	2,139	8,556
New York		
State University of New York - Buffalo	5,790	13,190
- Brooklyn	5,620	13,070
- Stoney Brook	5,625	13,025
- Syracuse	5,640	13,040
Texas		
Texas A & M	6,283	22,672
Texas Tech University	5,972	22,361
University of Texas - Dallas	5,810	22,199
- Galveston	5,713	22,102
- Houston	5,713	22,102
- San Antonio	5,686	22,102
Florida		
University of Florida	6,258	15,301
University of South Florida	6,381	15,424
Illinois		
University of Illinois	8,276	21,836
University of Southern Illinois	7,924	22,196
Ohio		
Wright State	7,899	10,824
Ohio State	6,453	18,606
University of Cincinnati	7,206	14,208
Medical College of Ohio	7,580	10,235
Northeastern Ohio	7,839	13,839
Michigan		
University of Michigan	10,952	20,514
Michigan State	8,472	18,219
Wayne State	7,636	14,867
New Jersey		
New Jersey Medical	11,057	14,323
Robert Wood Johnson Medical School	11,247	14,513
North Carolina		
East Carolina	1,654	12,442
University of North Carolina	1,827	12,615
Georgia		
Medical College of Georgia	4,169	12,053
Average	6,050	15,351

Notes: Although Pennsylvania is the fifth largest state in the nation, none of its medical schools is designated as public. The eleventh largest state, Georgia, was added to the table.

Source: Association of American Medical Colleges, 1991.

Summary

The *Master Plan for Florida Postsecondary Education* (1982) adopted two basic principles in the development of state tuition policy. One, tuition levels should be indexed to state general revenue appropriations with the student being required to bear an equitable portion of the total costs. Second, low tuition is not the preferred policy for providing financial assistance because it is not targeted to individual student needs.

Resident tuition rates at Florida's public allopathic medical schools are above average when compared to rates in other SREB states. When comparing tuition and fee levels of Florida public allopathic programs to the rest of the nation, levels in Florida may be characterized as average. In comparison to the ten largest states, resident tuition levels at Florida public allopathic medical programs are above average by approximately \$300.

Tuition levels vary greatly among states due in part to historical tuition policy and the independence of tuition levels from the cost of education. As a form of revenue for medical schools, tuition revenues comprised 2.7 percent of total revenues in the nation's public medical schools and 6.2 percent in independent medical schools in 1989-90 (Association of American Medical Colleges, 1991). The findings of the current cost study indicate that tuition revenues accounted for 0.93 percent of total revenues at the University of Florida College of Medicine, 1.25 percent at the University of South Florida College of Medicine, and 5.86 percent of the University of Miami School of Medicine in 1989-90 (based on calculations of LCME data).

In addition, the findings of the current cost study indicate that in 1989-90, resident tuition accounted for approximately 8.4 percent of the cost of instruction for medical students, 9.7 percent for dental students, and 12.4 percent for veterinary students. Adjusting 1989-90 data for increases in tuition and current state appropriations to the University of Florida Health Center and the University of South Florida Medical Center, resident tuition is estimated to account for 11.1 percent of the cost of instruction for medical students, 12.8 percent for dental students, and 13.5 percent for veterinary students in 1991-92.

Appendix B

EXCERPTS FROM THE 1987 REPORT, *COST OF MEDICAL EDUCATION*

FLORIDA BOARD OF REGENTS

LEGISLATIVE PROVISIO:

The Board of Regents, in conjunction with the 1986-87 review of health professions and in consultation with the University of Miami and the Postsecondary Education Planning Commission, shall develop a cost accounting procedure capable of producing comparable data on the cost of medical education for the two public medical schools and the first accredited medical school.

NARRATIVE

The Office of Health Affairs at the Board of Regents assembled a Medical Education Cost Study Committee in January, 1986, for the purpose of developing a system to identify the cost of medical education at the University of Florida, the University of South Florida and the University of Miami. Representatives on the Committee include:

Robert Garrigues, Ph.D., Assistant Vice President for Management and Budget, University of Florida

Patricia C. Haynie, Ph.D., Vice Chancellor for Health Affairs, Board of Regents

John C. Melendi, Assistant Director of the Medical Center, University of South Florida

Marvin H. Siegel, Assistant Vice President for Medical Affairs, University of Miami

The primary purpose of the Committee is to provide a forum among the three universities to share data reporting processes and develop a method for reporting medical education costs. Medical education costs are often described as elusive. Many problems frequently associated with reporting the costs of medical education include relying on faculty effort reports to allocate costs, treating the functions differently in cost centers, preparing separate cost data, budgeting and composition differences and varying philosophies of operation. In brief, Medical Centers agreeing on the cost of medical education is infrequent.

In spite of the obvious difficulties inherent in reporting cost data, the process of offering a method for reporting the cost of medical education began. One of the first issues facing the Committee was the necessity to have the universities agree upon a common format for the purposes of reporting the costs of medical education. Undertaking the responsibility for this process, the Committee first devised a reporting process for submitting the cost data. Categories identified for reporting data were segmented into activity structure, source of funds structure and allocation methodologies. In addition, further refinements in the reporting process also took place to ensure uniformity prior to the submission of cost data for the 1986 Legislative Session.

The data offered in this presentation, reflects an expenditure analysis rather than a cost analysis of the three medical schools in the state. Besides providing undergraduate education, medical schools are responsible for other activities and analysts are generally at a loss when asked to assign a cost to medical education. For instance, the percentage of direct expenditures toward the MD Degree declining over the past decade (See Exhibit A), underscores the invariable differences in allocating among the three medical schools, the costs for an undergraduate medical education. Furthermore, the primary mission among the schools differ and consequently faculty efforts in medical school activities show dissimilarities at certain periods of time (See Exhibit B). For example, when the Federal Government was infusing dollars into medical education, a greater percentage of faculty effort was earmarked for undergraduate education. But once the federal financial support lessened, faculty efforts turned toward increased reliance on medical practice plans and research. By contrast, the sources of funds among the three medical schools is showing consistent trends, while the percentage of state general revenue is relatively declining the percentage of medical practice plan income is rising (See Exhibit C). Not only is this trend characteristic among Florida medical schools, but is also prevalent among medical schools nationwide.

In summary, the process clearly requires ongoing monitoring and refinement on the part of the Committee to study the Cost of Medical Education to ensure consistent reporting practices among the three schools. By contrast, the caveat of this process is that the costs are sufficiently accurate for comparative purposes but additional refinement is not likely to be cost effective.

EXHIBIT A

EXECUTIVE SUMMARY
COST OF MEDICAL EDUCATION

<u>UNIVERSITY OF FLORIDA</u>	<u>1977-78</u>	<u>1984-85</u>	<u>1985-86</u>
Percentage of Direct Expenditures (MD Degree)	16.50%	13.30%	11.00%
Estimated Expenditures/MD Student*	\$13,800	\$34,900	\$32,400
Total Budget	36.50M	92.57M	102.11M
 <u>UNIVERSITY OF SOUTH FLORIDA</u>			
Percentage of Direct Expenditures (MD Degree)	29.70%	21.97%	20.74%
Estimated Expenditures/MD Student*	\$11,300	\$27,300	\$30,100
Total Budget	12.53M	41.03M	46.82M
 <u>UNIVERSITY OF MIAMI</u>			
Percentage of Direct Expenditures (MD Degree)	24.60%	16.30%	16.30%
Estimated Expenditures/MD Student*	\$25,300	\$37,200	\$41,100
Total Budget	62.93M	142.29M	154.32M

(*Rounded to the nearest hundred)

EXHIBIT B

PERCENT OF DIRECT EXPENDITURES BY ACTIVITY COLLEGES OF MEDICINE

	1977-78*			1984-85			1985-86		
	UF	USF	UM	UF	USF	UM	UF	USF	UM
Professional Degree (MD)	16.5	29.7	24.6	13.3	22.0	13.5	11.0	20.7	14.0
Basic Science (Grad. Stud.)	4.3	4.5	5.1	6.8	2.0	3.1	4.4	2.0	3.2
Housestaff	17.9	18.6	15.9	18.0	15.2	9.4	18.0	13.9	9.7
Research	34.0	24.3	23.2	27.0	29.0	28.3	26.6	31.1	29.2
Public Services				1.7	3.3	3.4	2.0	3.6	3.5
Patient Services	14.0	14.9	25.0	12.0	15.0	21.4	13.5	16.0	22.1
Support Services				17.3	12.7	17.1	20.0	12.2	14.4
Other Instruction**	<u>13.3</u>	<u>7.9</u>	<u>6.3</u>	<u>3.8</u>	<u>.5</u>	<u>3.8</u>	<u>4.6</u>	<u>.5</u>	<u>3.9</u>
TOTAL	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>

*The activity structure for 1977-78 is not identical to the 1984-85 and 1985-86 activity structures.

**Other Instruction: Includes Continuing Medical Education, Other College Instruction, Technical Program Instructions (1984-85 and 1985-86); Includes Continuing Education, Public Service, and Undergraduate Allied Health Education (1977-78).

EXHIBIT C

SOURCE OF FUNDS COLLEGES OF MEDICINE

	1977-78			1984-85			1985-86		
	UF	USF	UM	UF	USF	UM	UF	USF	UM
State General Revenue	43.6	81.7	7.9	27.5	46.97	6.51	26.7	44.55	6.24
Appropriated Trust Funds				5.3	.97		4.8	.61	
Parent University Support				1.6	.12	4.02	1.6	.11	.88
Governmental Contracts & Grants	22.5	14.6	42.2						
Federal				10.9	6.24	16.90	12.6	6.42	17.66
State				7.3	4.58	4.01	7.0	4.01	4.10
Local									
Gifts & Non-Government	16.2		9.7						
Contracts & Grants				3.7	5.77	11.35	4.5	7.17	12.98
Tuition			7.4						
MD						5.02			5.09
Non-MD						.50			.62
Endowment Income				3.3	.75	.73	2.3	.44	1.23
Medical Practice Plans	17.7	3.7	31.6	40.4	34.60	41.87	40.5	36.69	40.70
Reimbursement from Hospitals									
University-owned						.68			
Affiliated Hospitals									.93
Federal									
State									
Local						6.75			8.11
Other									
Sales & Services of									
Education Activities						.33			.18
Medical Conferences & Seminars						1.33			1.28
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

COST FINDING PROCESS

Nowadays, Legislators are inquiring into the cost of medical education and are frequently requesting justification for allocation of expenditures. Given the obvious limitations in finding costs for medical education in the Allocation of Expenditures, College of Medicine (1985-86) analysis offers a reasonably systematic and relatively comparable methodology to assess medical education at the three medical schools in the state. Care is warranted in applying these approaches, expenditures, and caveats.

The concept of cost attains meaning only within a framework of the methodology used, and the missions and programs of the school and/or schools involved. To demonstrate the impact of methodology, let us contrast the findings of the Institute of Medicine (IOM) and the Association of American Medical Colleges (AAMC). IOM in 1972-73 found an average cost per M.D. student of \$12,650 with a range of \$6,900 to \$18,650; AAMC in 1972 found an average of \$20,367 with a range of \$16,300 to \$26,400. Inflating these figures (by CPI) to the 1984-85 fiscal year and the 1985-86 fiscal year:

IOM average = \$29,992 (1984-85); \$31,113 (1985-86)
Range = \$16,359 to \$44,216 (84-85); \$16,970 to \$45,868 (1985-86)

AAMC average = \$48,288 (1984-85); \$50,092 (1985-86)
Range = \$38,645 to \$62,134 (1984-85); \$40,089 to \$64,455 (1985-86)

The two important points these data illustrate are (1) methodology influences the bottom line, i.e., IOM's \$29,992 (1984-85); \$31,113 (1985-86) vs AAMC's \$48,288 (1984-85); \$50,092 (1985-86), and (2) the ranges are significant using either methodology >\$27,857 (1984-85); \$28,898 (1985-86) for IOM; \$23,489 (1984-85); \$24,366 (1985-86) for AAMC.

To address the issues of the cost of educating a medical student at the University of Florida, University of Miami, and the University of South Florida, and the source of funding related to such costs, the expenditures at the three institutions have been allocated utilizing comparable methodology. This methodology was developed at a meeting with representatives from the three schools.

Briefly, the basic document each allocation study is dependent upon is the Faculty Activity Report; each faculty member reports his effort or time spent (on the average) to particular activities. Each faculty member reviews his activities for the period being studied and allocates the percentage of his effort to all of the activities in which he was involved. This is done without regard to the source or sources of salary. The fact that he is paid in full by the College of Medicine, a research grant, the teaching hospital, etc., should not effect the estimated activity distribution in any way. In other words, if a faculty member is paid from two or more sources, the percentage distribution of his total effort need not match the percent of salary received from each source. The data utilized in the comparative study is based on data that had already been collected by the three college of medicine in conjunction with their routine analysis of expenditures:

In comparing the three Faculty Activity Reports, it was determined that final cost objectives could be identified that were all encompassing of the activities at the three institutions and comparable to each other. Although the level of detail, i.e., the number of activities, may differ among the institutions, the activities as reported may be combined into nine broad activity categories which accurately represent the major activities of all three institutions. The activities (final cost objectives) are:

1. Professional Degree Education: Includes the effort expended by faculty for students enrolled in the medical degree program.
2. Housestaff Education: Housestaff includes residents and interns, i.e., M.D. graduates preparing for state licensure or specialty board certification.
3. Basic Science Graduate Education: Includes students enrolled in Master of Science or Ph.D. programs in the basic sciences such as microbiology, and biochemistry.
4. Continuing Education for Practicing Physicians
5. Other College Instruction: Includes the instruction for all undergraduate and graduate students enrolled in courses within the university and for students who are enrolled in programs that may not award degrees at the completion.
6. Technical Programs Instruction: Self-explanatory
7. Research: Self-explanatory
8. Patient Services: Self-explanatory
9. Public Services: Self-explanatory

Direct Support Services: Includes activities essential to the operation of the college, such as: college administration, student services, operation and maintenance of the facility; also included are services provided by the "parent" health or medical center and/or university.

Support services are not considered to be a final cost objective in itself and is therefore spread on a percentage basis to these other activities.

Individual faculty activity reports are aggregated at the departmental level or at the college level, whichever is appropriate for the given expenditure. All expenditures are then allocated on the basis of the aggregate of the faculty effort. The result is that if ten percent, for example, of the faculty effort is expended for undergraduate education, then ten percent of all expenditures within the College of Medicine are allocated to undergraduate education.

SEE ITEM 1

Activity structures within the three Colleges of Medicine have been compared. The activity structure has been compared by final cost objective, i.e., after

support services has been spread on a proportional basis to the final cost objectives.

The procedure as outlined is basically a standard approach to allocation of expenditures among categories; it is based, in fact, directly on the National Center for Higher Education Management Systems (NCHEMS) and AAMC methodologies. Frequently the point is made that undergraduate medical education requires an interaction between instruction, research, and patient care and that this instructional component cannot be performed without research and patient care (and the associated costs). The University of Miami following AAMC guidelines makes an interfunctional adjustment after the faculty member reports his effort; essential at the University of Florida and the University of South Florida the faculty member as an individual makes an interfunctional adjustment as he fills out his effort report. Therefore, it is felt that the comparable cost studies from the three schools rightly include an interfunctional adjustment for the University of Miami but not an interfunctional adjustment at the University of Florida or the University of South Florida. The end result is all three cases is believed to be comparable.

SEE ITEM 2

The second issue, the source of funding related to expenditures as allocated has been addressed at the aggregate level rather than in terms of source of funding for each activity. What has been reported is the amount of funds received from each source and the percent that is of total funds. In many cases, the funds received by the institution are not tied to a specific activity although there are notable exceptions. It appears to be inappropriate and misleading to attempt to identify the source of funding by activity. As previously pointed out, the faculty member distributes his time according to what he does and not according to his source of pay.

HOUSESTAFF ISSUE

In preparation for the 1987 Legislative Session, the cost of medical education issues are already beginning to surface. The Committee raising the issues, pose the questions whether a greater comparability is achievable, whether a better basis exists than the faculty effort report, and whether specific suggestions for improvement are available. The allocation of housestaff costs is enigmatic for medical schools, and presently the faculty effort reports are perhaps the most comprehensive approach to gather data for the purpose of reporting the costs of medical education. The American Association of Medical Colleges (AAMC) is, however, proposing a methodology for allocating the cost of housestaff to increase the accuracy of reporting data. Despite the potential benefits of the recommendation, the methodology is inconsistent with the previous study and will pose comparison variances between 1984-85 and 1985-86 cost of medical education data. At least for now, the Committee is agreeing to forego reporting housestaff costs using the AAMC methodology to reflect uniformity in cost data.

BEST COPY AVAILABLE

ITEM 1
ACTIVITY STRUCTURE
FISCAL YEAR 1985-86

	<u>\$</u>	<u>Dir. Exp.</u> <u>%</u>	<u>Total Exp.</u> <u>(Sup. Svc.</u> <u>Allocation)</u>	<u>%</u>
<u>UNIVERSITY OF FLORIDA</u>				
INSTRUCTION				
Professional Degree (MD)	\$11,267,279	11.0	\$14,175,262	14.4
Housestaff	18,344,079	18.0	23,077,635	22.6
Basic Science (Grad. Stu.)	4,469,568	4.4	5,622,614	5.7
Continuing Med. Educ.	1,676,155	1.7	2,108,920	2.0
Other College Instruction	1,676,155	1.7	2,108,920	2.0
Technical Programs Instr.	1,117,437	1.1	1,405,948	1.4
TOTAL INSTRUCTION	38,550,673	37.9	48,499,299	48.1
RESEARCH	27,190,140	26.6	34,206,301	33.1
PATIENT SERVICES (Incl. Med. Malpractice Ins.)	13,807,692	13.5	16,834,553	16.3
PUBLIC SERVICES	2,048,397	2.0	2,577,841	2.5
SUPPORT SERVICES				
College Administration	12,570,869	12.3		
Institutional Support				
University	1,649,516	1.6		
Health Science Center	1,387,890	1.4		
Academic Support	616,446	0.6		
Student Services	374,150	0.3		
Scholarships & Fellowships	609,979	0.6		
Operation & Maint. of Plant	2,919,653	2.9		
Library	392,589	0.3		
OTHER	0			
TOTAL	<u>\$102,117,994</u>	<u>100.0</u>	<u>\$102,117,994</u>	<u>100.0</u>

HEADCOUNT MEDICAL (MD) STUDENTS = 437

Estimated expenditures (1985-86) per MD student = \$32,438

Direct expenditures exclude VA, Auxiliaries; include Foundation.

ITEM 1
ACTIVITY STRUCTURE
FISCAL YEAR 1985-86

	<u>\$</u>	<u>Dir. Exp.</u> <u>%</u>	<u>Total Exp.</u> <u>(Sup. Svc.</u> <u>Allocation)</u>	<u>%</u>
<u>UNIVERSITY OF SOUTH FLORIDA</u>				
INSTRUCTION				
Professional Degree (MD)	\$9,709,449	20.74	\$11,370,449	24.28
Housestaff	6,512,131	13.91	7,347,520	15.69
Basic Science (Grad. Students)	933,069	1.99	1,070,333	2.29
Continuing Medical Education	115,445	0.25	130,267	0.28
Other College Instruction	132,827	0.28	149,864	0.32
Technical Programs Instructions	0			
TOTAL INSTRUCTION	17,402,921	37.17	19,818,367	42.86
RESEARCH	14,576,664	31.13	16,600,571	35.12
PATIENT SERVICES (Incl. Malpractice Ins.)	7,473,882	15.96	8,511,520	18.01
PUBLIC SERVICE	1,662,477	3.55	1,893,063	4.01
SUPPORT SERVICES				
College Administration	2,540,846	5.43		
Institutional Support University				
Health Science Center				
Academic Support	869,801	1.86		
Student Services	381,341	0.81		
Scholarships & Fellowships	51,649	0.11		
Operation/Maint. of Plant	1,465,572	3.13		
Library	398,368	0.85		
(Identify)				
TOTAL	<u>\$46,823,521</u>	<u>100.00</u>	<u>\$46,823,521</u>	<u>100.00</u>

HEADCOUNT MEDICAL (MD) STUDENTS = 378

Estimated expenditures 1985-86 per MD student = \$30,081

ITEM 1
ACTIVITY STRUCTURE
FISCAL YEAR 1985-86

<u>UNIVERSITY OF MIAMI</u>	<u>Direct Expenditure</u>		<u>Total Exp.</u> <u>(Sup. Svc.</u> <u>Allocation)</u>	<u>%</u>
	<u>\$</u>	<u>%</u>		
INSTRUCTION				
Professional Degree (MD)	\$21,628,000	14.0	\$25,993,000	21.59
Housestaff	15,060,000	9.7	17,886,000	11.84
Basic Science (Grad. Students)	5,069,000	3.3	6,147,000	4.55
Continuing Medical Education	1,592,000	1.0	1,849,000	1.09
Other College Instruction	0	.0	0	.0
Technical Programs Instruction	4,591,000	2.9	5,383,000	3.13
TOTAL INSTRUCTION	47,940,000	31.0	9,998,000	42.20
RESEARCH	45,075,000	29.2	52,358,000	30.74
PATIENT SERVICES (Incl. Malpractice Ins.)	34,194,000	22.1	5,525,000	23.32
PUBLIC SERVICES & OTHER	5,480,000	3.5	885,000	3.74
SUPPORT SERVICES				
College Administration	4,793,000	3.1		
Institutional Support				
University	7,295,000	4.7		
Health Science Center				
Academic Support	2,556,000	1.6		
Student Services	1,032,000	.6		
Scholarships & Fellowships	1,220,000	.7		
Operation & Maint. of Plant	5,978,000	3.8		
Library	818,000	.5		
Other (Identify)				
TOTAL EXPENDITURES	<u>\$154,326,000</u>	<u>100.00</u>	<u>\$23,692,000</u>	<u>100.00</u>

HEADCOUNT MEDICAL (MD) STUDENTS = 650

Estimated expenditure 1985-86 per MD student = \$41,144

*It is estimated that cost per student for two year students (PhD - MD Program) is 25% greater (\$51,430) than four year students.

ITEM 2
SOURCE OF FUNDS
FISCAL YEAR 1985-86
COLLEGES OF MEDICINE

	<u>Resources</u>	<u>Percent Of Total</u>
<u>University of Florida</u>		
State General Revenue	\$27,199,688	26.7
Appropriated Trust Funds	4,920,444	4.8
Parent University Support	1,649,516	1.6
Governmental Contracts & Grants		
Federal*	12,820,692	12.6
State	7,181,021	7.0
Local	0	
Gifts & Non-Govt.		
Contracts & Grants	4,584,260	4.5
Tuition		
MD	0	
Non-MD	0	
Endowment Income	2,379,304	2.3
Medical Practice Plans**	41,383,089	40.5
Reimbursement From Hospitals		
University-owned	0	
Affiliated Hospitals		
Federal	0	
State	0	
Local	0	
Other		
Sales & Services		
of Education Activities	0	
Medical Conferences		
& Seminars		
 TOTAL	 <u>\$102,117,994</u>	 <u>100.00</u>

*Report excludes VA support -- both direct payments and housestaff salaries expended from training grants.

**Academic Enrichment Fund (AEF), Florida Clinical Practice Association (FCPA), Miscellaneous Gifts and Grants (MG&G)

ITEM 2
SOURCE OF FUNDS
FISCAL YEAR 1985-86
COLLEGES OF MEDICINE

	<u>Resources</u>	<u>Percent Of Total</u>
University of South Florida		
State General Revenue	\$20,858,571	44.55
Appropriated Trust Funds	284,499	0.61
Parent University Support	51,649	0.11
Govt. Contracts & Grants		
Federal	3,007,732	6.42
State	1,877,671	4.01
Local	0	
Gifts/Non-Govt. Contracts & Grants	3,355,727	7.17
Tuition		
MD	0	
Non-MD	0	
Endowment Income	207,524	0.44
Medical Practice Plans	17,180,148	36.69
Reimbursement from Hospitals	-	
University Owned	0	
Affiliated Hospitals	0	
Federal	0	
State	0	
Local	0	
Sales/Services - Edu. Activities		
Conferences/Seminars		
 TOTAL	 <u>\$46,823,521</u>	 <u>100.00</u>

ITEM 2
SOURCE OF FUNDS
FISCAL YEAR -1985-86
COLLEGES OF MEDICINE

	<u>Resources</u>	<u>Percent Of Total</u>
<u>University of Miami</u>		
State General Revenue	\$9,630,000	6.24
Appropriated Trust Funds	0	
Parent University Support	1,362,000	0.88
Governmental Contracts & Grants		
Federal	27,251,000	17.66
State	6,329,000	4.10
Local	0	
Gifts & Non-Govt. Contracts & Grants	20,031,000	12.98
Tuition		
MD	7,849,000	5.09
Non-MD	962,000	0.62
Endowment Income	1,891,000	1.23
Medical Practice Plans	62,814,000	40.70
Reimbursement from Hospitals	-	
University Owned	1,440,000	0.93
Affiliated Hospitals	0	
Federal	0	
State	0	
Local	12,512,000	8.11
Other		
Sales/Services of Ed. Activities	283,000	0.18
Medical Conferences/Seminars	1,972,000	1.28
 TOTAL	 <u>\$154,326,000</u>	 <u>100.00</u>

Appendix C

**INSTITUTIONAL DATA REPORTS AND LETTERS RESPONDING
TO CONSULTANT'S REPORT**



October 18, 1991

Ms. Cyndi Balogh
State Board of Education
Postsecondary Education Planning Commission
Florida Education Center
Tallahassee, Florida 32399-0400

Dear Ms. Balogh:

In accordance with your discussions with Mr. Siegel and representatives of the other medical schools, we are submitting to you the Cost Study for the 1989-90 fiscal year, which estimates the cost of educating a medical student.

At the planning sessions that were held in Tallahassee where you met with Dr. Haynie and her colleagues and representatives of the Auditor General's office, the Governor's office, the three medical schools, as well as other individuals, it was agreed that in determining the percentage of faculty effort that would be used in the 1989-90 Study, the following principles would apply.

1. Faculty effort would be based on the faculty effort that was used in the 1985-86 Cost Study, subject to review by the Dean of the School, and, when appropriate, also the departmental chairmen, in order to determine if the faculty effort in the 1985-86 Cost Study was still appropriate to be used in the 1989-90 Cost Study.

2. The formulas used for the distribution of support services, including the cost of medical education, administrative offices, cost of scholarships and fellowships, and costs of all other support services, would be allocated in accordance with the formulas that were agreed upon and were used as part of the 1985-86 Cost Study.

3. It was the recommendation of the representatives of the three medical schools that it would not be beneficial to attempt to allocate revenues to specific programs because of the need to come up with the number of very arbitrary assumptions, in order to arrive at such a distribution.

I reviewed the 1985-86 faculty effort distribution with Mr. Siegel and Ms. Derinda Pell, and it is my opinion that subject to

Vice President for Medical Affairs and Dean (R-699)
P.O. Box 016099
Miami, Florida 33101 C-1
(305) 547-6545
Location: 1600 N.W. 10th Avenue, RMSB 1143A

the adjustments indicated below, the faculty effort used in the 1985-86 Study (this indicated approximately 16% of the total faculty effort was devoted to the program of undergraduate medical education) would be a reasonable estimate as to the faculty effort spent in teaching medical students.

The adjustment that had been made to the figure of 16% was that 2% had been transferred to the program of educating the physician scientist at the School of Medicine, and 1% had been an adjustment to other educational programs. The net result being that in the 1989-90 Study, we are applying 13% of total faculty effort to the program of teaching undergraduate medical students.

We believe this is a very reasonable approach, and is a reasonable estimate as to the faculty effort in teaching undergraduate medical students for the following reasons:

- a. In reviewing the figures presented by the department chairmen as part of the Liaison Committee on Medical Education Accreditation Review of our Medical School in 1988, the department chairmen, as an aggregate, estimated that their faculty are spending 14.7% of their time teaching undergraduate students.
- b. We believe that the above estimate, if anything, is a conservative estimate, since changes in the curriculum over the past several years have resulted in more faculty effort being spent on teaching medical students, because of the fact that whereas in the past, the traditional methodology was a single faculty member lecturing to 130 or 150 students in a large lecture hall, now, in addition to the traditional method of having a faculty member lecture to 150 students, you also have many additional lectures where one faculty member will be lecturing to 12 or 15 students on a very specific subject that is important to their medical education.
- c. Finally, without a very detailed eight to ten months study, we would not make a major change in the figures that we are using for the 1989-90 Study. If we were to do a new study, each faculty member would be asked to provide a new effort report which would be analyzed by the administrative staff in each department and verified over a number of months. Such a study would have to include all of the other steps associated with the Cost Allocation Study, as recommended by the Association of American Medical Colleges, which is an eight to ten months project.

As Dr. Charles Sprague pointed out in his very famous Cost Study which was presented to the Association of American Medical

Ms. Cyndi Balogh

October 18, 1991

Colleges and to the Deans of the American and Canadian medical schools in 1975, a Cost Allocation Study in an Academic Medical Center is an attempt to estimate the cost of each of the programs that are carried in the various academic medical centers throughout the country.

The reader of these studies should always bear in mind that these are estimated figures and that rather than referring to specific figures, it is much more accurate to refer to ranges of figures, since these are estimates.

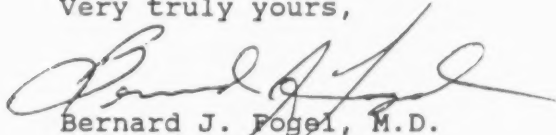
Also, as Dr. Sprague and his committee pointed out in their Study, it is very difficult to compare the cost of educating a medical student from one medical school to another.

There are major differences in each medical school, such as the type of curriculum, the size of the research program, the faculty responsibilities for the care of indigent patients, etc.

Therefore, everyone that utilizes the data from the three medical schools in the State of Florida must bear in mind all of the above in order to properly utilize the results of this Study.

We have enjoyed participating with yourself, Dr. Haynie, the members of the other medical schools, and the other individuals involved in this project. Please let us know if we can be of any further assistance to you in regard to this matter, or any other matter for which our resources and expertise may be of assistance in providing information to the state legislature and the executive branch of government.

Very truly yours,



Bernard J. Fogel, M.D.
Senior Vice President
for Medical Affairs
and Dean, School of Medicine

cc: Dr. Patricia Haynie
Mr. John C. Melendi, University of South Florida
Dr. Robert G. Garrigues, University of Florida
Mr. Marvin H. Siegel
Ms. Derinda S. Pell

	A	B	C	D	E	F	G	H
1			UNIVERSITY OF MIAMI -- SCHOOL OF MEDICINE					
2			Fiscal Year End May 31, 1990 Activity Report					
3			Use of Funds Structure					
4								
5								
6								
7								
8		DIRECT CATEGORY	EXPENSE	EFFORT	SUPPORT	PERCENT	TOTAL	PER CENT
9			Amount	% OF	SERVICES	TO DIR	EXPENSE	OF TOTAL
10				DIR	ALLOCATED			
11					PER SCH D			
12		INSTRUCTION						
13								
14								
15		Professional Degree	28,617	13%	\$7,536	44%	\$36,153	39.39%
16		House Staff	24,214	11%	\$4,843	29%	\$29,057	31.66%
17		Basic Science (Grd St)	8,805	4%	\$2,118	13%	\$10,923	11.90%
18		Continuing Medical Ed	2,201	1%	\$377	2%	\$2,578	2.81%
19		Physician Scientist	4,403	2%	\$930	5%	\$5,333	5.81%
20		Technical Programs Inst	6,604	3%	\$1,131	7%	\$7,735	8.43%
21								
22		Total Instruction	74,845	34%	\$16,935	41%	\$91,780	35.04%
23								
24								
25		RESEARCH	70,442	32%	\$12,063	29%	\$82,505	31.50%
26								
27		PATIENT SERVICES	66,039	30%	\$11,309	27%	\$77,348	29.53%
28								
29		PUBLIC SERVICES	8,805	4%	\$1,508	4%	\$10,313	3.94%
30								
31		TOTAL DISTRIBUTED	220,131	100%	\$41,814	100%	\$261,945	100.00%
32								
33								
34								
35		HEADCOUNT MEDICAL (MD) STUDENTS = 558						
36								
37		Estimated expenditures 1989/90 per MD student = \$64,790						
38								
39								

	A	B	C	D	E	F
40						
41						
42	SUPPORT SERVICES					
43						
44						
45	COLLEGE ADMINISTRATION				\$5,422	
46						
47	INSTITUTIONAL SUPPORT				\$12,273	
48						
49	ACADEMIC SUPPORT				\$5,990	
50						
51	OPERATIONS & MAINTENANCE				\$8,048	
52						
53	LIBRARY				\$2,006	
54						
55	OTHER				\$3,957	
56					-----	
57	TOTAL				\$37,696	
58						
59	STUDENT SERVICES				\$1,899	
60						
61	SCHOLARSHIPS AND FELLOWSHIPS				\$2,219	
62						
63	TOTAL SUPPORT SERVICES				\$41,814	
64					=====	
65						
66	TOTAL EXPENDITURES PER AAMC FLQ (ADJ) *				\$261,945	
67						
68	TOTAL SUPPORT SERVICES				\$41,814	
69						
70	DIFFERENCE				\$220,131	
71						
72	* INSTITUTIONAL SUPPORT ADJUSTED TO ACTUAL AMOUNT PAID					

UM SCHOOL OF MEDICINE
PROGRAM COST ALLOCATION STUDY
SOURCE OF FUNDS
1989-90 FISCAL YEAR

<u>TUITION AND FEES</u>		
MEDICAL STUDENTS	\$11,358,811	4.29%
OTHER	\$4,152,148	1.57%
<u>TOTAL</u>	<u>\$15,510,959</u>	<u>5.86%</u>
STATE APPROPRIATION	\$13,022,647	4.92%
<u>GRANTS AND CONTRACTS</u>		
FEDERAL	\$37,287,356	14.09%
STATE	\$13,237,828	5.00%
LOCAL	\$1,015,722	0.38%
PRIVATE	\$12,361,912	4.67%
<u>TOTAL</u>	<u>\$63,902,818</u>	<u>24.15%</u>
INDIRECT COST RECOVERY	\$16,569,952	6.26%
GIFTS	\$15,086,003	5.70%
ENDOWMENT INCOME	\$2,651,322	1.00%
MEDICAL FACULTY PRACTICE PLAN	\$110,444,270	41.74%
<u>REIMBURSEMENT FROM HOSPITALS</u>		
UNIVERSITY OWNED	\$4,207,304	1.59%
AFFILIATED	\$22,341,227	8.44%
<u>TOTAL</u>	<u>\$26,548,531</u>	<u>10.03%</u>
<u>OTHER</u>		
SALES & SERVICE ED ACTIVITIES	\$399,426	0.15%
MEDICAL BOOKSTORE	\$154,088	0.06%
MISCELLANEOUS	\$401,737	0.15%
<u>TOTAL</u>	<u>\$955,251</u>	<u>0.36%</u>
<u>TOTAL</u>	<u>\$264,691,753</u>	<u>100%</u>



UNIVERSITY OF FLORIDA
VICE PRESIDENT FOR HEALTH AFFAIRS

• HEALTH SCIENCE CENTER

• PO BOX 100014
Gainesville, Florida • zip 32610-0014

October 1, 1991

Ms. Cyndi Balogh
State Board of Education
Postsecondary Education Planning Commission
Florida Education Center
Tallahassee, FL 32399-0400

Dear Cyndi:

Please find attached the final schedules for the Cost of Medical Education, Cost of Dental Education, and Cost of Veterinary Education. All documents have been reviewed and approved by the appropriate dean involved. Part of the approval process was the dean's review of the 1985-86 faculty effort. The Deans of Dentistry and Veterinary Medicine constituted new efforts based on their professional judgment and knowledge of their programs as well as some internal documents. The medical school Dean felt that in essence the overall programs had not undergone significant change thereby the faculty effort was essentially the same. With the planned changes in curriculum it is suggested that if this type of study is to be replicated in the future that adequate lead time be provided in order to conduct a new faculty effort analysis.

If there are questions, please let me know.

Sincerely,

Robert G. Garrigues, Ph.D.
Associate Vice President for
Finance and Operations

RGG/ew

Attachments

78

J HILLIS MILLER HEALTH CENTER

College of Medicine • College of Nursing • College of Pharmacy • College of Health Related Professions • College of Dentistry
College of Veterinary Medicine • Veterinary Medical Teaching Hospital • Shands Hospital • Veterans Administration Medical Center •
UF Health Science Center/Jacksonville

C-7

EQUAL EMPLOYMENT OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

ITEM 1
ACTIVITY STRUCTURE
FISCAL YEAR 1989-90

	<u>\$</u>	<u>Dir. Exp.</u> <u>%</u>	<u>Total Exp.</u> <u>(Sup. Svc.</u> <u>Allocation</u>	<u>%</u>
<u>UNIVERSITY OF FLORIDA</u>				
INSTRUCTION				
Professional Degree (MD)	\$ 18,000,133	10.11	\$ 24,200,929	13.59
Housestaff	33,220,687	18.65	41,487,830	23.30
Basic Science (Grad. Stu.)	6,959,555	3.91	9,398,152	5.28
Continuing Med. Educ.	2,642,312	1.48	3,385,462	1.90
Other College Instruction	2,642,312	1.48	3,385,462	1.90
Technical Programs Instr.	1,761,541	.99	2,255,741	1.27
TOTAL INSTRUCTION	65,226,595	36.63	84,114,633	47.23
RESEARCH	48,858,327	25.19	56,911,342	31.96
PATIENT SERVICES (Incl. Med. Malpractice Ins.)	27,317,545	15.34	32,518,544	18.26
PUBLIC SERVICES	3,628,324	2.04	4,536,541	2.55
SUPPORT SERVICES				
College Administration	19,967,905	11.21		
Institutional Support				
University	2,467,131	1.39		
Health Science Center	2,026,039	1.14		
Academic Support	4,717,192	2.65		
Student Services	436,613	.25		
Scholarships & Fellowships	1,493,126	.84		
Operation & Maint. of Plant	5,013,462	2.82		
Library	928,799	.52		
OTHER	0	0		
TOTAL	<u>\$178,081,003</u>	<u>100.00</u>	<u>\$178,081,003</u>	<u>100.00</u>

HEADCOUNT MEDICAL (MD) STUDENTS = 429

Estimated expenditures (1989-90) per MD student = \$56,412

Direct expenditures exclude VA, Auxiliaries; include Foundation.

ITEM 2
SOURCE OF FUNDS
FISCAL YEAR 1989-90
COLLEGE OF MEDICINE

<u>University of Florida</u>	<u>Resources</u>	<u>Percent of Total</u>
State General Revenue	\$ 44,272,942	24.86
Appropriated Trust Fund	5,291,880	2.97
Parent University Support	2,467,131	1.39
Governmental Contracts & Grants		
Federal*	15,210,942	8.54
State	10,032,502	5.63
Private	11,383,654	6.39
Gifts & Non-Govt.		
Contracts & Grants		
Tuition	2,175,496	1.22
Endowment Income	3,913,272	2.20
Medical Practice Plans**	70,038,780	39.33
Reimbursement From Hospital		
University-owned		
Affiliated Hospitals		
Federal		
State		
Local		
Other		
Sales & Services		
Of Education Activities		
Medical Conferences		
& Seminars		
University Medical Center	13,294,404	7.47
TOTAL	<u>\$178,081,003</u>	<u>100.00</u>

* Report excludes VA support -- both direct payments and housestaff salaries expended from training grants.

** Academic Enrichment Fund (AEF), Florida Clinical Practice Association (FCPA), Miscellaneous Gifts and Grants (MG&G).

ITEM 1
ACTIVITY STRUCTURE
FISCAL YEAR 1989-90

	<u>\$</u>	<u>Dir. Exp.</u> %	<u>Total Exp.</u> (Sup. Svc. Allocation)	<u>%</u>
<u>UNIVERSITY OF FLORIDA</u>				
INSTRUCTION				
Professional Degree (DMD)	\$ 11,263,337	44.45	\$ 13,851,074	56.66
Ph.D.	209,746	.83	257,920	1.02
Graduate Masters	335,593	1.32	412,578	1.63
Advanced Dental Education	566,313	2.23	696,196	2.75
Other College Instruction	629,237	2.48	774,705	3.06
TOTAL INSTRUCTION	13,004,226	51.32	15,992,473	63.11
RESEARCH	5,579,232	22.02	6,861,057	27.08
PATIENT SERVICES (Incl. Med. Malpractice Ins.)	2,033,608	8.03	2,486,546	9.81
SUPPORT SERVICES				
Institutional Support	599,552	2.37		
University	591,571	2.33		
Health Science Center	1,377,348	5.44		
Academic Support				
Student Services				
Scholarships & Fellowships				
Operation & Maint. of Plant	1,463,853	5.78		
Library	271,195	1.07		
OTHER	419,491	1.66		
TOTAL	<u>\$ 25,340,076</u>	<u>100.00</u>	<u>\$ 25,340,076</u>	<u>100.00</u>

HEADCOUNT DENTAL (DMD) STUDENTS = 286

Estimated expenditures (1989-90) per DMD student = \$48,430

ITEM 2
SOURCE OF FUNDS
FISCAL YEAR 1989-90
COLLEGE OF DENTISTRY

<u>University of Florida</u>	<u>Resources</u>	<u>Percent of Total</u>
State General Revenue	\$ 13,386,152	52.83
Appropriated Trust Fund	720,000	2.84
Parent University Support	599,552	2.37
Governmental Contracts & Grants		
Federal	3,032,571	11.97
State	50,831	.20
Private	431,702	1.70
Gifts & Non-Govt.		
Contracts & Grants	542,861	2.14
Tuition	1,573,917	6.21
Indirect Cost Recovery	480,668	1.90
Endowment Income	70,731	.28
Practice Plan**	3,755,648	14.82
Reimbursement From Hospital		
University-owned		
Affiliated Hospitals		
Federal		
State		
Local		
Other		
Sales & Services		
Of Education Activities	586,692	2.32
Medical Conferences & Seminars		
Other	108,751	.43
TOTAL	<u>\$ 25,340,076</u>	<u>100.00</u>

** Academic Enrichment Fund (AEF) and Miscellaneous Gifts and Grants (MG&G).

ITEM 1
ACTIVITY STRUCTURE
FISCAL YEAR 1989-90

	<u>\$</u>	<u>Dir. Exp.</u> <u>%</u>	<u>Total Exp.</u> <u>(Sup. Svc.</u> <u>Allocation</u>	<u>%</u>
<u>UNIVERSITY OF FLORIDA</u>				
INSTRUCTION				
Professional Degree (DVM)	\$ 8,427,526	27.32	\$ 12,101,801	39.23
Residents & Interns	2,145,188	6.95	3,082,504	9.99
Graduate Instruction	689,525	2.24	998,839	3.24
Other College Instruction	1,149,208	3.73	1,645,985	5.34
TOTAL INSTRUCTION	11,411,447	40.23	17,829,129	57.79
RESEARCH	9,065,975	29.39	13,021,444	42.21
SUPPORT SERVICES				
College Administration	4,060,535	13.16		
Institutional Support				
University	664,501	2.15		
Health Science Center	742,364	2.41		
Academic Support	1,728,436	5.60		
Student Services				
Scholarships & Fellowships				
Operation & Maint. of Plant	1,836,992	5.95		
Library	340,323	1.10		
OTHER	0	0		
TOTAL	<u>\$ 30,850,573</u>	<u>100.00</u>	<u>\$ 30,850,573</u>	<u>100.00</u>

HEADCOUNT VETERINARY (DVM) STUDENTS = 317

Estimated expenditures (1989-90) per DVM student = \$38,176

ITEM 2
SOURCE OF FUNDS
FISCAL YEAR 1989-90
COLLEGE OF VETERINARY MEDICINE

<u>University of Florida</u>	<u>Resources</u>	<u>Percent of Total</u>
State General Revenue*	\$ 17,812,963	57.74
Appropriated Trust Fund	2,441,642	7.91
Parent University Support	664,501	2.15
Governmental Contracts & Grants		
Federal*	4,633,035	15.02
State	385,530	1.25
Private	1,752,924	5.68
Gifts & Non-Govt. Contracts & Grants		
Tuition	1,396,663	4.53
Endowment Income	1,763,315	5.72
Veterinary Practice Plans**		
Reimbursement From Hospital		
University-owned		
Affiliated Hospitals		
Federal		
State		
Local		
Other		
Sales & Services		
Of Education Activities		
Medical Conferences & Seminars		
 TOTAL	 \$ 30,850,573	 100.00

* Includes General Appropriations from University of Florida Health Science Center (UFHSC) and IFAS.

** Not Active



Office of the Dean
College of Medicine
University of South Florida
12901 Bruce B. Downs Blvd., MDC Box 66
Tampa, Florida 33612-4799
(813) 974-4950

October 16, 1991

Cynthia Balogh
State Board of Education
Postsecondary Education Planning Commission
Florida Education Center
Tallahassee, Florida 32399-0400

Dear Ms. Balogh:

Pursuant to the proviso language accompanying Specific Appropriation 577A of the 1991 General Appropriations Act, enclosed is the University of South Florida's Cost of Medical Education Study for 1989-90 data as directed by the Postsecondary Education Planning Commission.

As agreed by general consensus among participants:

1. Financial data was taken from the AAMC-Annual Financial Questionnaire submitted for the 1989-90 fiscal year.
2. Faculty Effort Reports were conducted utilizing all faculty data and reviewed by the Dean for appropriateness.

These two issues were addressed in an attempt to bring comparability of the results of the three Florida medical schools. However, there remain significant operational differences in the composition and make-up of the three medical schools, coupled with differing techniques in allocation of support costs, that make comparability of this data difficult. While the AAMC Annual Financial Questionnaire is a viable financial document, the allocation of support costs, such as plant, library, administrative, and other campus expenditures can not be equalized among the Medical Centers.

In conclusion, the composition of the data, the faculty effort collection process, the support cost allocations, the various hospital affiliations, the differing organizational structures of the Health Sciences Centers and practice plan arrangements make the comparability of this data elusive.

If you have any questions, please advise.

Sincerely,

Marvin R. Dunn, M.D.
Dean, College of Medicine

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cc: Ronald P. Kaufman, Vice President
Health Sciences Center

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TAMPA

ST PETERSBURG

SARASOTA

FORT MYERS

LAKELAND

COST OF MEDICAL EDUCATION
ACTIVITY STRUCTURE
FISCAL YEAR 1989-90

	<u>Direct Expenditure</u>		<u>Total Exp. (Sup. Svc Allocation)</u>	
INSTRUCTION				
Professional Degree	17,699,144	15.24%	21,024,749	18.11%
Housestaff	14,340,505	12.35%	17,010,038	14.65%
Ph.D.	1,491,501	1.28%	1,814,368	1.56%
Continuing Medical Education	637,269	0.55%	637,269	0.55%
Other College Instruction	4,209,347	3.62%	4,992,931	4.30%
RESEARCH	32,857,211	28.29%	38,474,773	33.13%
PATIENT SERVICES	19,588,378	16.87%	22,909,048	19.73%
PUBLIC SERVICE	7,910,479	6.81%	9,262,925	7.98%
SUPPORT SERVICES				
College Administration	9,446,172	8.13%		
Academic Support	2,938,809	2.53%		
Institutional Support				
University				
Health Sciences Center				
Student Services	575,586	0.50%		
Scholarships and Fellowships	45,219	0.04%		
Operation & Maintenance of Plant	3,382,345	2.91%		
Library	1,004,136	0.86%		
OTHER				
TOTAL	\$116,126,101	100.00%	\$116,126,101	100.00%

HEADCOUNT MEDICAL (MD) STUDENTS = 384

Direct Expenditures exclude the Cancer Center, Malpractice Insurance, and transfers from the Practice Plan to a Sponsored Research Account to avoid double costing of expenses.

Estimated expenditures (1989-90) per MD Student = \$54,752

COST OF MEDICAL EDUCATION
SOURCE OF FUNDS
FISCAL YEAR 1989-90

University of South Florida-College of Medicine

State General Revenue	30,324,468	26.11%
Appropriated Trust Fund	2,283,712	1.97%
Parent University Support		
Governmental Contracts & Grants		
Federal	4,482,555	3.86%
State	2,354,040	2.03%
Private	17,608,181	15.16%
Gifts and Non-Gov't Contracts		
Tuition	1,729,909	1.49%
Endowment Income	1,187,182	1.02%
Medical Practice Plans	52,919,257	45.57%
Reimbursement from Hospital		
University Owned		
Affiliated Hospitals		
Other		
Sales & Services of Ed. Activities	3,236,797	2.79%
Medical Conferences		
TOTAL	<u>\$116,126,101</u>	<u>100.00%</u>

UNIVERSITY OF
Miami
SCHOOL OF MEDICINE
M E M O R A N D U M

TO: Mr. Patrick H. Dallet
Assistant Executive Director
Postsecondary Education Planning Commission

FROM: Dr. Robert Garrigues
Mr. John Melendi
Mr. Marvin Siegel

SUBJECT: **Medical Education Cost Information**

MH Siegel (FOR THE GROUP)

Thank you for your memorandum of November 15th, 1991.

We would like to take this opportunity to provide you with our comments concerning the working draft dated November 5th, 1991, entitled "Medical School Financial Comparisons for the 1989-90 Fiscal Year."

We would recommend that the report begin with reference to the proviso language instructing each of the three medical schools to conduct a program cost allocation study which would estimate the cost for educating a medical student at the three medical schools in the state of Florida.

We recommend that the report should begin with comments on the programmatic cost data prepared by the three medical schools in response to the proviso language.

As instructed in the proviso language, the three medical schools have prepared programmatic cost data based upon a replication of the study which was prepared in 1965-86 using the procedures developed by the Association of American Medical Colleges beginning in the late 1960's.

Based upon telephone conference calls with representatives of the medical schools and PEPC, certain ground rules were agreed upon for the preparation of the cost data.

These ground rules were followed by each of the schools in the preparation of their reports, and the results were the estimated costs of educating a medical student, which ranged from approximately \$55,000 at the two state schools to \$64,000 at the University of Miami School of Medicine.

We would suggest that the report in response to the proviso language should concentrate on the methodology that was used as agreed upon between PEPC and the three medical schools and the

Assistant Vice President for Medical Administration (16-28)

P.O. Box 016960

C-17

Miami, Florida 33101

305-547-6001

Location: 1600 NW 10th Avenue, RMSB 11-7A

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results of that study.

We believe that the comments regarding the programmatic cost data should be similar to the type of report that was prepared by the Sprague Committee in 1975 when they did a nation-wide study of the cost of medical education on behalf of the Association of American Medical Colleges.

We have attached excerpts from the Sprague report for your reference. We would be glad to provide you with a detailed copy of this report if you should so desire.

Regarding the comments in the working draft which compares the LCME financial statement with the programmatic cost report, we must take exception.

The purpose of the LCME report is to provide a financial statement of revenue and expenditures following standard university accounting definitions and is not intended to be used for programmatic cost analysis.

The expenditures that are used in the program cost allocation report/study are based upon the total expenditures as reflected in the LCME financial statement with adjustments necessary to provide as accurate programmatic cost data as possible.

We believe in the report any adjustments that are made to either total revenues or expenditures as listed in the LCME report should be explained in accordance with the information received from the medical schools, and if you need additional information or data, we would be very pleased to supply it to you.

Again, we must emphasize that for the purpose of responding to the requirements of the proviso language, the LCME report is provided merely as back-up data to support the figures included in the programmatic cost study.

The proviso language requested "an analysis of funds which are expended to support students in medicine...by fund source on a per student basis as well as an analysis of the various activities or cost objectives which are funded by the college and fund source."

We recognize that this was included in the proviso language. However, since the data is not available, we do not agree with the presentation in exhibits 2a, 2b, 3a, 3b, 4a, and 4b since we believe that this is an artificial attempt to match expenditures and source of funds and could prove to be very misleading since it is based upon assumptions that cannot be supported by generally accepted accounting rules.

We strongly disagree with this approach since we are not aware of this having ever been used in any other programmatic cost allocation

tion study whereas the programmatic cost data provided by the three schools is based upon guidelines used in the past in other medical schools in determining the cost of medical education.

In your memo of November 15th, you say "if upon reviewing this information in depth, you have further comments, corrections or concerns, please send them to me at your earliest convenience. In addition, your response to the following issues would be appreciated.

1. What are the strengths and weaknesses of using the LCME annual financial questionnaire as the data source for the PEPC cost study? What types of expenditures should be excluded to produce meaningful and comparable cost information?"

The previous statements provided to you in the body of our response will provide you with most of our thoughts concerning the answer to this first question.

Specifically, we think we have pointed out to you very clearly the strengths and weaknesses of using the LCME annual financial questionnaire and it is our very strong opinion that that is completely inappropriate for determining programmatic costs at a health science center.

The second question "What type of expenditure should be excluded to produce a meaningful and comparable cost information?" is answered specifically in the schedules that show the exclusions that were made by the University of Florida and the University of South Florida and we have explained these in detail and additional information is included later in this document.

No exclusions were made at the University of Miami because it was our opinion that based upon the financial information presented in the AAMC report and the particular situation at the University of Miami, it was not necessary to make these exclusions. Whereas, at the University of Florida and at the University of South Florida, in order to come up with meaningful cost figures, it was necessary to make certain exclusions for the reasons stated in the explanations.

As has been stated by the Association of American Medical Colleges in document after document regarding the cost of medical education, the situation at every medical school in the United States is so different that you cannot make generalizations and you cannot make absolute comparisons from one medical school to another unless you look in detail at the differences that exist from one medical school to another in regard to size of the institution, resources available for education of medical students, faculty salaries, staff support, administrative costs, cost of maintenance and physical plant, etc., etc.

2. "Is the 1986 faculty effort report the best basis for distributing direct costs? Is a later year, or some other basis for estimation, available?"

The reason that the 1986 faculty effort reports were used was the fact that they are the latest faculty effort reports that are available.

At the first meeting with the representatives of the three medical schools and staff, it was pointed out that it would be much more useful for the purposes of the proviso language if we would have available to us faculty effort reports for the 1989-90 fiscal year. But since these are not available, and since the time required to do new effort reports and a very complete programmatic cost allocation study normally takes six to eight months, it was impossible to use any other faculty effort reports other than those that were available from the 1985-86 study.

3. "Is faculty effort the best basis for allocating overhead? Most higher education costing methods use direct personnel costs by primary program as the basis rather than faculty FTE (this would be significant if the higher paid faculty tend to cluster in one of the primary programs)."

After a very long series of meetings in 1987 where many alternatives for distribution for allocation of overhead, the decision was made to use the three formulas that are included in the study. It was the opinion of all concerned that these three formulas (copies of the formulas in detail were provided to you) would be the most accurate method of allocating overhead costs within the time allotted and are completely consistent with formulas used by most other medical schools in determining the cost of medical education.

When you say that it would be significant if the higher paid faculty tend to cluster in one of the primary programs - this is not a problem and this does not create any distortion in the cost study since faculty effort is not clustered in any one of the primary programs and as one would expect, the higher paid faculty would be those faculty who are spending a significant percentage of their time in clinical activities and faculty effort reports will reflect this which would increase the cost related to the faculty practice plan and the programs of clinical care and in no way distort the cost of research and instructional programs.

Attached is a document prepared by Dr. John Melendi, which provides you with a detailed explanation of the adjustments made to the LCME financial report in arriving at the total expenditures for the purpose of the program cost allocation report. We have also provided you with similar explanations concerning the adjustments made to the LCME financial data for the University of Florida.

/s

Attachments

cc: David Challoner, M.D.
Ronald Kaufman, M.D.

HEALTH SCIENCES CENTER
ASSOCIATE VICE PRESIDENT
FOR HEALTH AFFAIRS



BOX 23
12901 BRUCE B. DOWNS BOULEVARD
TAMPA, FLORIDA 33612-4799
PHONE (813) 974-3017

MEMORANDUM

Date: November 13, 1991

To: Dr. Patricia Haynie
Vice Chancellor for Health Affairs
State University System of Florida
Collins Building Room 201-A
325 W. Gaines Street
Tallahassee, FL 32301

From: John C. Melendi
Associate Vice President for Health Affairs
Health Sciences Center
University of South Florida

Subject: PEPC Report
Medical Schools Financial Comparisons for FY 1989-90
(Working Draft, November 5, 1991)

.....

As requested, listed below are comments regarding the Cost of Medical Education Working Draft dated November 5, 1991. These are the results of staff discussions between the College of Medicine and the Vice President's Office.

Page 1 Comparability of Data Between LCME and PEPC Reports

There is discussion regarding the fact that total revenues for UF and USF Medical Schools did not match between the LCME and PEPC reports. However, all adjustments for exclusions that were performed by USF were done on total expenditures. The Moffitt Cancer Center was excluded in the amount of \$8,913,653 as this money is passed through our budget to Moffitt and the College of Medicine has no access to these funds. There was an exclusion of \$2,264,379 for the Professional (Malpractice) Insurance Trust Fund as this represented liability insurance for doctors and residents. This trust fund does not provide operational resources to the College. And, finally, there was an adjustment of \$7,711,722 to eliminate a double entry of expenditures on the Faculty Practice Plan and Sponsored Research Accounts. The full amount of \$7,711,722 was included in the \$17,608,181 under Private Contracts/ Grants as a transfer.

C-21 92

TAMPA ST. PETERSBURG SARASOTA FORT MYERS LAKELAND

THE UNIVERSITY OF SOUTH FLORIDA IS AN AFFIRMATIVE ACTION / EQUAL OPPORTUNITY INSTITUTION

While no similar adjustments appear to be performed by the University of Miami Medical School, there is some question as to why housestaff expenditures were only \$509,015 while the University of South Florida's housestaff expenditures were over \$11,000,000.

Page 2 Exhibit 1

The \$22,160,123 exclusion has no relationship as to how USF computed the cost per M.D. student. The total expenditure was \$135,015,855. USF excluded \$18,889,754.

\$ 8,913,653	Moffitt Cancer Center (pass thru funds)
2,264,379	Professional Insurance Trust Fund (Malpractice Insurance)
<u>7,711,722</u>	This was excluded as it is listed <u>twice</u> in the LCME report; once as an expenditure to the faculty practice plan and once as an expenditure through contracts and grants.
 \$18,889,754	
 <u>3,270,369</u>	 Excess of Revenues over Expenditures and Transfers
 <u>\$22,160,123</u>	 Total

The first column represents total revenues. All cost data was based on total expenditures rather than total revenues. All exclusions were based on total expenditures. Therefore, the first column should represent expenditures rather than revenues in an expenditure analysis. The USF College of Medicine excluded \$18,889,754. There is no mention from the report that the recorded difference of \$3,270,369 was in actuality Excess of Revenues over Expenditures and Transfers as recorded on the LCME Report.

Page 3 General Comments

We believe that the report should begin with two statements extracted from this page:

"We were able to develop what we believe are reasonable estimates from the LCME Report."

"Several significant differences across the three schools were observed, although it is not clear whether the differences are programmatic or merely reflect variations in accounting practices."

This report, as received, gives the reader a very negative first impression when it addresses revenues instead of expenditures.

Pages 4-9 Various Exhibits

The exhibits that summarize the expenditures by Source of Funds demonstrate the differing allocation of expenditures between the medical school as illustrated by the wide variance in total Instruction and Departmental Research Expenditures.

UF	\$98,876,534
UM	\$42,748,929
USF	\$43,400,404

Page 10 1/3 of Expenditures Not Recorded

The University of South Florida records 65% of its expenditures in the Not Recorded in Medical School's Accounts Category primarily due to the faculty practice plan being an independent corporation. It should be noted that our faculty practice plan does submit a budget and audited financial statements to the State.

Page 11 Expenditures per Medical Student

The report makes the following statement "The training of professional (MD) students is either the third or fourth largest category of direct expenditure at each of the three schools. In fact, all instructional programs combined fail to account for one-half of the spending on primary program activities at any of the schools."

This is a very negative statement. It could be noted on the PEPC Report that before any adjustments are taken, total state appropriations and tuition and fees for USF amounted to 30% of its total revenue, while research and practice plan funding accounted for approximately 66% of its total revenue. Therefore, I believe this report should discuss the various sources of funds as they relate to the complexity of the college's mission, rather than its negative approach in the above quote.

The last paragraph on page 11 concerns the support costs of the three schools. The LCME recording process allows some flexibility in the recording of support costs and, therefore, this could account for some of the discrepancies. For example, support costs for the Library; Operation, Maintenance and Plant; and Health Science Center Administration are assigned to the College of Medicine based on a formula or criteria which is unique to each medical school. For example; Operation, Maintenance and Plant costs were allocated to the College of Medicine based on a percentage of total square feet for the College of Medicine at the University of South Florida. Another college with the exact same square footage, but with several additional colleges in the Health Sciences Center, would produce a different result even though the square footage allocations were the same for both medical schools. These types of allocations could account for differences in the "support" costs.

Page 12 Exhibits

The amounts and percentages differ from Table 1 on the draft supplied by Mrs. Cyndi Balogh dated October, 1991, from the chart (see attached).

Page 14 Conclusions

The following "quote" is made under the conclusions category on Page 14, "A second observation is that the MD-level of instruction is only a small portion of the total activity being funded by the state at the three medical schools." On page 12, Exhibit 5, the University of South Florida's total "Instruction Expenditures" (with support costs allocated) represents 39.16% of expenditures, while as noted earlier total state appropriations and tuition and fees amounted to approximately 30%. Again, this is a negative statement that could be re-worded and presented in a more positive way to discuss "mix" or "variety of sources" that fund medical education.

xc: Dr. Marvin Dunn
Dr. Ronald Kaufman

Appendix D

**CONSULTANT'S REPORT ON MEDICAL EDUCATION
FINANCIAL COMPARISONS
FOR THE 1989-90 FISCAL YEAR**

CONSULTANT'S REPORT ON MEDICAL EDUCATION FINANCIAL COMPARISONS FOR THE 1989-90 FISCAL YEAR

Introduction

In support of chapter 4 of the PEPC report entitled "Cost of Medical, Dental and Veterinary Education in Florida," we have examined two separate submissions of financial data for the 1989-90 fiscal year for each of the three state-funded medical schools in Florida. The two submissions were:

- 1) the Annual Questionnaire on Medical School Financing, which was originally prepared for submission by the medical schools to the Liaison Committee on Medical Education (LCME) of the Association of American Medical Colleges
- 2) the analysis of estimated expenditures per medical student, which was prepared by each medical school and submitted to PEPC in compliance with legislative proviso.

Data from each source was necessary to prepare the analyses requested in the legislative proviso. The LCME data provide the "source-use" information while the PEPC report provides cost per student details. We have compared the two reports from each medical school with one another and the corresponding reports across the three medical schools.

A separate section of the proviso asks for an analysis of the cost of dental and veterinary education programs in the state. The University of Florida, which is the only institution in the state that offers either dental or veterinary education, supplied expenditure information in the PEPC format.

This paper describes our major findings and conclusions.

Comparability of Data Between LCME and PEPC Reports

We observed that the revenues for the UF and USF medical schools did not match between the LCME and PEPC reports. Several of the corresponding detailed source of funds categories as well as total revenue did not balance with one another. Since we

were using data from both sources in this report, we asked representatives of the two schools to prepare a reconciliation of the differences. They reported that funding for certain activities had been removed in an effort to further enhance comparability of the data and to retain consistency with earlier medical cost reports for 1985 and 1986. As examples of some of the adjustments, UF excluded in its PEPC report certain funding related to the VA hospital housestaff and to the one-time divestiture of the Jacksonville Faculty Practice Association of activities not directly related to the education program, while USF excluded the pass-through funding for the Moffitt Cancer Center and certain practice plan expenditures which were double-counted in the LCME report due to the plan's independent status. Exhibit 1 compares reported revenue amounts for the LCME report, shows where the adjustments were made by UF and USF, and finally lists the amounts reported to PEPC.

Source-Use Matrices

One aspect of the proviso language accompanying Specific Appropriation 577A of the 1991 General Appropriations Act requires that the PEPC report include:

an analysis of the funds which are expended to support students in medicine . . . by fund source on a per student basis as well as an analysis of the various activities or cost objectives which are funded by the college and fund source.

Schedule B of the LCME report provides this type of information for each unrestricted fund, but consolidates all unrestricted revenue sources. Therefore, we relied on schedule A of the LCME report to estimate the distribution of unrestricted revenue. Our estimation procedure basically calls for proration of unrestricted expenditures by function across the several unrestricted revenue sources. (The accounting terminology "unrestricted" is used to identify those sources of funds where university leaders can exercise considerable discretion over how the funds are to be expended.)

EXHIBIT 1

COMPARISON OF REPORTED REVENUE AMOUNTS LCME AND PEPC FINANCIAL REPORTS, FY90

<u>Revenue Category</u>	<u>LCME</u>	<u>Adjustments</u>	<u>PEPC</u>
University of Florida			
Tuition and Fees	\$2,175,496	\$0	\$2,175,496
State Appropriations	45,249,990	977,048	44,272,942
Parent University Support	0	(2,467,131)	2,467,131
Federal Contracts	16,922,312	1,711,370	15,210,942
State Contracts	10,249,857	217,355	10,032,502
Private Contracts	11,383,654	0	11,383,654
Indirect Cost Recovery	5,333,856	5,333,856	0
Gifts	3,913,273	3,913,273	0
Endowment	2,591,502	(1,321,770)	3,913,272
Practice Plan	107,743,864	37,705,084	70,038,780
Hospitals: Shands/Appropriated TF	5,291,880	0	5,291,880
Hospitals: University Medical Center	13,294,404	0	13,294,404
Hospitals: VA	9,490,015	9,490,015	0
Total Revenue	\$233,640,103	\$55,559,100	\$178,081,003

University of South Florida			
Tuition and Fees	\$1,729,909	\$0	\$1,729,909
State Appropriations	40,919,645	10,595,177	30,324,468
Federal Contracts	4,482,555	0	4,482,555
State Contracts	2,382,142	28,103	2,354,040
Private Contracts	17,608,181	0	17,608,181
Indirect Cost Recovery	1,571,708	1,571,708	0
Appropriated Trust Fund	0	(2,283,712)	2,283,712
Gifts	1,187,183	1,187,183	0
Endowment	0	(1,187,183)	1,187,182
Practice Plan	65,168,104	12,248,847	52,919,257
Sales and Services	3,236,797	0	3,236,797
Hospitals: VA	0	0	0
Total Revenue	\$138,286,224	\$22,160,123	\$116,126,101

We prepared a pair of source and use of funds matrices for each medical school (see exhibits 2A & 2B, 3A & 3B, and 4A & 4B, respectively, for UF, USF and UM). The revenue source and the function or activity supported is summarized for each expenditure. These exhibits display this information both in dollars and as a percentage distribution of total recorded expenditures, thus enabling a comparison of three schools and budgets of different sizes. Several significant differences across the three schools were observed, reflecting both programmatic differences and variations in organizational arrangements and accounting practice.

In analyzing the revenue dimension of the source-use matrices, it is interesting to note that unrestricted state appropriations are a relatively minor revenue source for each of the three schools, ranging from just under 5 percent at UM to slightly over 15 percent at USF. Medical practice plan income and sponsored programs are much larger contributors to the financing of the three medical schools.

A major difference across the three schools can be seen in terms of the percentages of expenditures devoted to medical education and related activities that are not recorded on medical school accounts. That is, a portion of medical school activity is funded through a separate organization. For example the medical practice plan at USF is an independent corporation and maintains its own financial records, although it does submit a budget and audited financial statement to the state. These differences are summarized as follows:

<u>MEDICAL SCHOOL</u>	<u>% OF EXPENDITURES NOT RECORDED</u>
University of Florida	14%
University of South Florida	65%
University of Miami	0%

EXHIBIT 2-A

EXPENDITURE SUMMARY BY SOURCE OF FUNDS
UNIVERSITY OF FLORIDA

Function of Expenditures

Source of Funds	Instruction & Departmental Research	Research	Service	Program Support	Scholarships & Fellowships	Housestaff	Operation & Maintenance of Plant	Other Fuctions	Fund Transfers	Total by Source
<i>Unrestricted Current Funds</i>										
State Appropriations	18,786,717	4,050,824	279,342	7,935,491	152,001	382,040	1,035	0	0	31,587,450
Student Fees	0	0	0	0	0	0	0	0	0	0
Indirect Cost Recovery	1,389,034	299,506	20,654	586,727	11,238	28,247	77	0	0	2,335,482
Endowment Income	466,768	100,645	6,940	197,162	3,777	9,492	26	0	0	784,811
Medical Practice Plan	59,083,327	12,739,649	878,518	24,956,740	478,034	1,201,499	3,255	0	0	99,341,021
Other	0	0	0	0	0	0	0	0	0	0
<i>Subtotal</i>	<i>79,725,846</i>	<i>17,190,624</i>	<i>1,185,454</i>	<i>33,676,120</i>	<i>645,050</i>	<i>1,621,278</i>	<i>4,392</i>	<i>0</i>	<i>0</i>	<i>134,048,764</i>
<i>Restricted Funds</i>										
Federal	1,059,133	12,895,810	0	108,850	202,352	2,656,167	0	0	0	16,922,312
State	8,704,087	1,003,889	0	127,700	0	414,181	0	0	0	10,249,857
Local	0	0	0	0	0	0	0	0	0	0
Private	736,058	10,104,285	0	45,126	423,482	74,703	0	0	0	11,383,654
Other	7,839,094	0	0	0	0	10,747,190	0	0	0	18,586,284
<i>Subtotal</i>	<i>18,338,372</i>	<i>24,003,984</i>	<i>0</i>	<i>281,676</i>	<i>625,834</i>	<i>13,892,241</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>57,142,107</i>
Total Recorded	98,064,218	41,194,608	1,185,454	33,957,796	1,270,884	15,513,519	4,392	0	0	191,190,871
<i>Not Recorded in</i>										
<i>Medical School Accounts</i>										
Federal	0	9,490,015	0	0	0	0	0	0	0	9,490,015
Other	812,316	3,570,951	0	0	222,248	0	5,298,267	7,672,031	5,173,870	22,749,683
<i>Subtotal</i>	<i>812,316</i>	<i>13,060,966</i>	<i>0</i>	<i>0</i>	<i>222,248</i>	<i>0</i>	<i>5,298,267</i>	<i>7,672,031</i>	<i>5,173,870</i>	<i>32,239,698</i>
Combined Total	98,876,534	54,255,574	1,185,454	33,957,796	1,493,132	15,513,519	5,302,659	7,672,031	5,173,870	223,430,569

Technical Notes:

Functional expenditures by detailed source of unrestricted funds are estimated in proportion to total unrestricted expenditures by function

Source:

Schedules A and B of Annual Questionnaire on Medical School Financing for FY90, as submitted by the university to AAMC/LCME

EXHIBIT 2-B

PERCENTAGE DISTRIBUTION OF EXPENDITURES
UNIVERSITY OF FLORIDA*Function of Expenditures*

Source of Funds	Instruction & Departmental Research	Research	Service	Program Support	Scholarships & Fellowships	Housestaff	Operation & Maintenance of Plant	Other Fuctions	Fund Transfers	Total by Source
<i>Unrestricted Current Funds</i>										
State Appropriations	8.41%	1.81%	0.13%	3.55%	0.07%	0.17%	0.00%	0.00%	0.00%	14.14%
Student Fees	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Indirect Cost Recovery	0.62%	0.13%	0.01%	0.26%	0.01%	0.01%	0.00%	0.00%	0.00%	1.05%
Endowment Income	0.21%	0.05%	0.00%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.35%
Medical Practice Plan	26.44%	5.70%	0.39%	11.17%	0.21%	0.54%	0.00%	0.00%	0.00%	44.46%
Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Subtotal</i>	<i>35.68%</i>	<i>7.69%</i>	<i>0.53%</i>	<i>15.07%</i>	<i>0.29%</i>	<i>0.73%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>60.00%</i>
<i>Restricted Funds</i>										
Federal	0.47%	5.77%	0.00%	0.05%	0.09%	1.19%	0.00%	0.00%	0.00%	7.57%
State	3.90%	0.45%	0.00%	0.06%	0.00%	0.19%	0.00%	0.00%	0.00%	4.59%
Local	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Private	0.33%	4.52%	0.00%	0.02%	0.19%	0.03%	0.00%	0.00%	0.00%	5.09%
Other	3.51%	0.00%	0.00%	0.00%	0.00%	4.81%	0.00%	0.00%	0.00%	8.32%
<i>Subtotal</i>	<i>8.21%</i>	<i>10.74%</i>	<i>0.00%</i>	<i>0.13%</i>	<i>0.28%</i>	<i>6.22%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>25.57%</i>
Total Recorded	43.89%	18.44%	0.53%	15.20%	0.57%	6.94%	0.00%	0.00%	0.00%	85.57%
<i>Not Recorded in</i>										
<i>Medical School Accounts</i>										
Federal	0.00%	4.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.25%
Other	0.36%	1.60%	0.00%	0.00%	0.10%	0.00%	2.37%	3.43%	2.32%	10.18%
<i>Subtotal</i>	<i>0.36%</i>	<i>5.85%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>0.10%</i>	<i>0.00%</i>	<i>2.37%</i>	<i>3.43%</i>	<i>2.32%</i>	<i>14.43%</i>
Combined Total	44.25%	24.28%	0.53%	15.20%	0.67%	6.94%	2.37%	3.43%	2.32%	100.00%

Technical Notes:

Functional expenditures by detailed source of unrestricted funds are estimated in proportion to total unrestricted expenditures by function

Source:

Schedules A and B of Annual Questionnaire on Medical School Financing for FY90, as submitted by the university to AAMC/LCME

EXHIBIT 3-A

EXPENDITURE SUMMARY BY SOURCE OF FUNDS
UNIVERSITY OF SOUTH FLORIDA*Function of Expenditures*

Source of Funds	Instruction & Departmental Research	Research	Service	Program Support	Scholarships & Fellowships	Housestaff	Operation & Maintenance of Plant	Other Fuctions	Fund Transfers	Total by Source
<i>Unrestricted Current Funds</i>										
State Appropriations	17,653,132	667,282	198,101	1,501,289	40,247	1,021,572	0	0	0	21,081,623
Student Fees	1,448,575	54,756	16,256	123,192	3,303	83,828	0	0	0	1,729,909
Indirect Cost Recovery	685,032	25,894	7,687	58,258	1,562	39,642	0	0	0	818,075
Endowment Income	0	0	0	0	0	0	0	0	0	0
Medical Practice Plan	0	0	0	0	0	0	0	0	0	0
Other	47,079	1,780	528	4,004	107	2,724	0	0	0	56,222
<i>Subtotal</i>	<i>19,833,818</i>	<i>749,711</i>	<i>222,572</i>	<i>1,686,743</i>	<i>45,219</i>	<i>1,147,766</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>23,685,829</i>
<i>Restricted Funds</i>										
Federal	197,709	3,886,595	390,786	35	0	0	0	0	0	4,475,125
State	0	515,502	1,866,588	52	0	0	0	0	0	2,382,142
Local	0	0	0	0	0	0	0	0	0	0
Private	469	1,417,186	2,441,165	2,774,418	0	10,523,231	0	0	0	17,156,469
Other	0	0	0	0	0	0	0	0	0	0
<i>Subtotal</i>	<i>198,178</i>	<i>5,819,283</i>	<i>4,698,539</i>	<i>2,774,505</i>	<i>0</i>	<i>10,523,231</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>24,013,736</i>
Total Recorded	20,031,996	6,568,994	4,921,111	4,461,248	45,219	11,670,997	0	0	0	47,699,565
<i>Not Recorded in</i>										
<i>Medical School Accounts</i>										
Federal	0	0	0	7,430	0	0	0	0	0	7,430
Other	23,368,408	16,454,823	16,846,512	27,239,947	65,122	0	3,334,048	0	0	87,308,860
<i>Subtotal</i>	<i>23,368,408</i>	<i>16,454,823</i>	<i>16,846,512</i>	<i>27,247,377</i>	<i>65,122</i>	<i>0</i>	<i>3,334,048</i>	<i>0</i>	<i>0</i>	<i>87,316,290</i>
Combined Total	43,400,404	23,023,817	21,767,623	31,708,625	110,341	11,670,997	3,334,048	0	0	135,015,855

Technical Notes:

Functional expenditures by detailed source of unrestricted funds are estimated in proportion to total unrestricted expenditures by function

Source:

Schedules A and B of Annual Questionnaire on Medical School Financing for FY90, as submitted by the university to AAMC/LCME

EXHIBIT 3-B

PERCENTAGE DISTRIBUTION OF EXPENDITURES
UNIVERSITY OF SOUTH FLORIDA

Function of Expenditures

Source of Funds	Instruction & Departmental Research	Research	Service	Program Support	Scholarships & Fellowships	Housestaff	Operation & Maintenance of Plant	Other Fuctions	Fund Transfers	Total by Source
<i>Unrestricted Current Funds</i>										
State Appropriations	13.07%	0.49%	0.15%	1.11%	0.03%	0.76%	0.00%	0.00%	0.00%	15.61%
Student Fees	1.07%	0.04%	0.01%	0.09%	0.00%	0.06%	0.00%	0.00%	0.00%	1.28%
Indirect Cost Recovery	0.51%	0.02%	0.01%	0.04%	0.00%	0.03%	0.00%	0.00%	0.00%	0.61%
Endowment Income	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Medical Practice Plan	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other	0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%
<i>Subtotal</i>	<i>14.69%</i>	<i>0.56%</i>	<i>0.16%</i>	<i>1.25%</i>	<i>0.03%</i>	<i>0.85%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>17.54%</i>
<i>Restricted Funds</i>										
Federal	0.15%	2.88%	0.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.31%
State	0.00%	0.38%	1.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.76%
Local	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Private	0.00%	1.05%	1.81%	2.05%	0.00%	7.79%	0.00%	0.00%	0.00%	12.71%
Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Subtotal</i>	<i>0.15%</i>	<i>4.31%</i>	<i>3.48%</i>	<i>2.05%</i>	<i>0.00%</i>	<i>7.79%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>17.79%</i>
Total Recorded	14.84%	4.87%	3.64%	3.30%	0.03%	8.64%	0.00%	0.00%	0.00%	35.33%
<i>Not Recorded in Medical School Accounts</i>										
Federal	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%
Other	17.31%	12.19%	12.48%	20.18%	0.05%	0.00%	2.47%	0.00%	0.00%	64.67%
<i>Subtotal</i>	<i>17.31%</i>	<i>12.19%</i>	<i>12.48%</i>	<i>20.18%</i>	<i>0.05%</i>	<i>0.00%</i>	<i>2.47%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>64.67%</i>
Combined Total	32.14%	17.05%	16.12%	23.49%	0.08%	8.64%	2.47%	0.00%	0.00%	100.00%

Technical Notes:

Functional expenditures by detailed source of unrestricted funds are estimated in proportion to total unrestricted expenditures by function

Source:

Schedules A and B of Annual Questionnaire on Medical School Financing for FY90, as submitted by the university to AAMC/LCME

EXHIBIT 4-A

EXPENDITURE SUMMARY BY SOURCE OF FUNDS
UNIVERSITY OF MIAMI*Function of Expenditures*

Source of Funds	Instruction & Departmental Research	Research	Service	Program Support	Scholarships & Fellowships	Housestaff	Operation & Maintenance of Plant	Other Fuctions	Fund Transfers	Total by Source
<i>Unrestricted Current Funds</i>										
State Appropriations	1,750,290	10,261	8,840,042	1,707,017	138,428	17,969	558,640	0	0	13,022,647
Student Fees	2,084,728	12,222	10,529,159	2,033,186	164,878	21,403	665,382	0	0	15,510,959
Indirect Cost Recovery	2,227,061	13,056	11,248,025	2,172,000	176,135	22,864	710,811	0	0	16,569,952
Endowment Income	356,347	2,089	1,799,772	347,537	28,183	3,658	113,735	0	0	2,651,322
Medical Practice Plan	14,844,104	87,024	74,971,850	14,477,104	1,174,000	152,397	4,737,791	0	0	110,444,270
Other	3,325,177	19,494	16,794,188	3,242,967	262,984	34,138	1,061,296	0	0	24,740,244
<i>Subtotal</i>	<i>24,587,707</i>	<i>144,146</i>	<i>124,183,036</i>	<i>23,979,811</i>	<i>1,944,608</i>	<i>252,430</i>	<i>7,847,656</i>	<i>0</i>	<i>0</i>	<i>182,939,394</i>
<i>Restricted Funds</i>										
Federal	4,933,330	31,711,277	120,276	0	116,078	0	406,395	0	0	37,287,356
State	3,323,617	1,401,992	8,512,219	0	0	0	0	0	0	13,237,828
Local	453,183	0	562,539	0	0	0	0	0	0	1,015,722
Private	1,586,986	10,162,590	252,102	0	360,234	0	0	0	0	12,361,912
Other	7,864,106	5,444,114	2,022,313	1,686,363	254,333	256,585	200,210	0	0	17,728,024
<i>Subtotal</i>	<i>18,161,222</i>	<i>48,719,973</i>	<i>11,469,449</i>	<i>1,686,363</i>	<i>730,645</i>	<i>256,585</i>	<i>606,605</i>	<i>0</i>	<i>0</i>	<i>81,630,842</i>
Total Recorded	42,748,929	48,864,119	135,652,485	25,666,174	2,675,253	509,015	8,454,261	0	0	264,570,236
<i>Not Recorded in Medical School Accounts</i>										
Federal	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
<i>Subtotal</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Combined Total	42,748,929	48,864,119	135,652,485	25,666,174	2,675,253	509,015	8,454,261	0	0	264,570,236

Technical Notes:

Functional expenditures by detailed source of unrestricted funds are estimated in proportion to total unrestricted expenditures by function

Source:

Schedules A and B of Annual Questionnaire on Medical School Financing for FY90, as submitted by the university to AAMC/LCME

EXHIBIT 4-B

PERCENTAGE DISTRIBUTION OF EXPENDITURES
UNIVERSITY OF MIAMI

Function of Expenditures

Source of Funds	Instruction & Departmental Research	Research	Service	Program Support	Scholarships & Fellowships	Housestaff	Operation & Maintenance of Plant	Other Fuctions	Fund Transfers	Total by Source
<i>Unrestricted Current Funds</i>										
State Appropriations	0.66%	0.00%	3.34%	0.65%	0.05%	0.01%	0.21%	0.00%	0.00%	4.92%
Student Fees	0.79%	0.00%	3.98%	0.77%	0.06%	0.01%	0.25%	0.00%	0.00%	5.86%
Indirect Cost Recovery	0.84%	0.00%	4.25%	0.82%	0.07%	0.01%	0.27%	0.00%	0.00%	6.26%
Endowment Income	0.13%	0.00%	0.68%	0.13%	0.01%	0.00%	0.04%	0.00%	0.00%	1.00%
Medical Practice Plan	5.61%	0.03%	28.34%	5.47%	0.44%	0.06%	1.79%	0.00%	0.00%	41.74%
Other	1.26%	0.01%	6.35%	1.23%	0.10%	0.01%	0.40%	0.00%	0.00%	9.35%
<i>Subtotal</i>	<i>9.29%</i>	<i>0.05%</i>	<i>46.94%</i>	<i>9.06%</i>	<i>0.74%</i>	<i>0.10%</i>	<i>2.97%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>69.15%</i>
<i>Restricted Funds</i>										
Federal	1.86%	11.99%	0.05%	0.00%	0.04%	0.00%	0.15%	0.00%	0.00%	14.09%
State	1.26%	0.53%	3.22%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%
Local	0.17%	0.00%	0.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.38%
Private	0.60%	3.84%	0.10%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	4.67%
Other	2.97%	2.06%	0.76%	0.64%	0.10%	0.10%	0.08%	0.00%	0.00%	6.70%
<i>Subtotal</i>	<i>6.86%</i>	<i>18.41%</i>	<i>4.34%</i>	<i>0.64%</i>	<i>0.28%</i>	<i>0.10%</i>	<i>0.23%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>30.85%</i>
Total Recorded	16.16%	18.47%	51.27%	9.70%	1.01%	0.19%	3.20%	0.00%	0.00%	100.00%
<i>Not Recorded in</i>										
<i>Medical School Accounts</i>										
Federal	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Subtotal</i>	<i>0.00%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>0.00%</i>
Combined Total	16.16%	18.47%	51.27%	9.70%	1.01%	0.19%	3.20%	0.00%	0.00%	100.00%

Technical Notes:

Functional expenditures by detailed source of unrestricted funds are estimated in proportion to total unrestricted expenditures by function

Source:

Schedules A and B of Annual Questionnaire on Medical School Financing for FY90, as submitted by the university to AAMC/LCME

This great disparity in organizational arrangements and, as a result, accounting practice can potentially lead to misleading comparisons of spending rates across the three schools. At a minimum, extreme care must be taken to know what revenue sources are included (or excluded) before comparing expenditure levels.

A second difference is observed in the expenditure level for "housestaff." In this case, the financial data reflect differences in organizational arrangements at UM where most housestaff are considered to be employees of Jackson Memorial Hospital rather than the university.

<u>MEDICAL SCHOOL</u>	<u>HOUSESTAFF EXPENDITURES</u>	<u>PERCENTAGES</u>
University of Florida	\$15,513,519	6.94%
University of South Florida	\$11,670,997	8.64%
University of Miami	\$ 509,015	0.19%

A third significant difference is in the total expenditures for instruction and departmental research (including unrestricted, restricted and not recorded). Again, a wide variation across the three schools is observed:

<u>MEDICAL SCHOOL</u>	<u>EXPENDITURES FOR INSTRUCTION</u>
University of Florida	\$98,876,534
University of South Florida	\$43,400,404
University of Miami	\$42,748,929

Since the medical enrollments do not vary by a 2:1:1 ratio (and, in fact, UM has the largest enrollment), much of this difference almost certainly is related to different accounting practices.

Expenditures Per Medical Student

The PEPC information request to the three medical schools was for financial data in a format depicting both the direct and full cost per professional (MD) student. The format also included information about expenditure levels for other (non MD) instructional

programs, research, patient services, and public service. As instructed in the proviso language, the three medical schools prepared program cost data by replicating a similar 1985-86 cost study which used procedures first developed by the AAMC.

Exhibit 5 shows the direct expenditures for each of these primary programs and their percentage distribution at each of the three medical schools as well as the allocated indirect costs. These data reveal much about the complexity and comprehensiveness of the program activity at the medical schools. The training of professional (MD) students - the focus of the cost analysis -- is either the third or fourth largest category of direct expenditure at each of the three schools. Each of the schools spends about one-third of its budget on research and another 20-30 percent on patient and public service.

The portion of expenditures recorded as "support" varies across the three schools as seen in exhibit 6. The overhead burden varies from 17.62% at USF to 26.27% at UF. This variation is attributed to differences in organizational arrangements which, in turn, affects whether the costs of certain activities are classified as direct or support expenditures. Under the cost accounting conventions adopted by the three schools for the PEPC cost study, the instructional programs carry a larger indirect cost burden since the allocation of support costs is based on faculty effort rather than direct expenditures.

The final exhibit (exhibit 7) shows the direct expenditures for professional instruction and the portion of indirect expenditures allocated to professional instruction for each medical school. Data are reported in total and on a per student basis. The UM medical school spends more per student (both direct expenditures and total expenditures) than either UF or USF. Total spending per student at the two state universities is approximately the same.

EXHIBIT 5

ANALYSIS OF DIRECT AND ALLOCATED SUPPORT EXPENDITURES FOR PRIMARY PROGRAMS AT UNIVERSITY HEALTH SCIENCE CENTERS

UNIVERSITY OF FLORIDA, FY90

Activity Category	Direct Expenditures	%	Allocated Support Expenditures	%	Estimated "Full-Cost" Expenditures	%
Instruction						
Professional	\$18,000,133	12.76%	\$6,200,796	16.74%	\$24,200,929	13.59%
Housestaff	33,220,687	23.56%	8,267,143	22.31%	41,487,830	23.30%
Basic Science	6,959,555	4.93%	2,438,597	6.58%	9,398,152	5.28%
Continuing Medical Education	2,642,312	1.87%	743,150	2.01%	3,385,462	1.90%
Other College Instruction	2,642,312	1.87%	743,150	2.01%	3,385,462	1.90%
Technical Programs Instruction	1,761,541	1.25%	494,200	1.33%	2,255,741	1.27%
Subtotal, Instruction	\$65,226,540	46.25%	\$16,887,036	50.98%	\$84,113,576	47.23%
Research	44,858,327	31.81%	12,053,015	32.53%	56,911,342	31.96%
Patient Services	27,317,545	19.37%	5,200,999	14.04%	32,518,544	18.26%
Public Service	3,628,324	2.57%	908,217	2.45%	4,536,541	2.55%
Total, Primary Programs	\$141,030,736	100.00%	\$37,049,267	100.00%	\$178,080,003	100.00%

UNIVERSITY OF SOUTH FLORIDA, FY90

Activity Category	Direct Expenditures	%	Allocated Support Expenditures	%	Estimated "Full-Cost" Expenditures	%
Instruction						
Professional	\$17,699,144	17.93%	\$3,325,605	19.12%	\$21,024,749	18.11%
Housestaff	14,340,505	14.52%	2,669,533	15.35%	17,010,038	14.65%
Basic Science	1,491,501	1.51%	322,867	1.86%	1,814,368	1.56%
Continuing Medical Education	637,269	0.65%	0	0.00%	637,269	0.55%
Other College Instruction	4,209,347	4.26%	783,584	4.51%	4,992,931	4.30%
Technical Programs Instruction	0	0.00%	0	0.00%	0	0.00%
Subtotal, Instruction	\$38,377,766	38.87%	\$7,101,589	40.83%	\$45,479,355	39.16%
Research	32,857,211	33.28%	5,617,562	32.30%	38,474,773	33.13%
Patient Services	19,586,378	19.84%	3,320,670	19.09%	22,909,048	19.73%
Public Service	7,910,479	8.01%	1,352,446	7.78%	9,262,925	7.98%
Total, Primary Programs	\$98,733,834	100.00%	\$17,392,267	100.00%	\$116,126,101	100.00%

UNIVERSITY OF MIAMI, FY90

Activity Category	Direct Expenditures	%	Allocated Support Expenditures	%	Estimated "Full-Cost" Expenditures	%
Instruction						
Professional	\$28,617,000	13.00%	\$7,536,000	18.02%	\$36,153,000	13.80%
Housestaff	24,214,000	11.00%	4,843,000	11.58%	29,057,000	11.09%
Basic Science	6,805,000	4.00%	2,118,000	5.07%	10,923,000	4.17%
Continuing Medical Education	2,201,000	1.00%	377,000	0.90%	2,578,000	0.98%
Other College Instruction	4,403,000	2.00%	930,000	2.22%	5,333,000	2.04%
Technical Programs Instruction	6,604,000	3.00%	1,131,000	2.70%	7,735,000	2.95%
Subtotal, Instruction	\$74,844,000	34.00%	\$16,935,000	40.50%	\$91,779,000	35.04%
Research	70,442,000	32.00%	12,063,000	28.85%	82,505,000	31.50%
Patient Services	66,039,000	30.00%	11,309,000	27.05%	77,348,000	29.53%
Public Service	8,805,000	4.00%	1,508,000	3.61%	10,313,000	3.94%
Total, Primary Programs	\$220,130,000	100.00%	\$41,815,000	100.00%	\$261,945,000	100.00%

Source: University submissions for PEPC Medical Cost Study; data are for FY90

EXHIBIT 6

ANALYSIS OF OVERHEAD BURDEN AS A PERCENT OF DIRECT COST
FOR PRIMARY PROGRAMS AT UNIVERSITY HEALTH SCIENCE CENTERS

Activity Category	University of Florida			University of South Florida			University of Miami		
	Direct Expenditures	Allocated Support Expenditures	Support as a % of Direct	Direct Expenditures	Allocated Support Expenditures	Support as a % of Direct	Direct Expenditures	Allocated Support Expenditures	Support as a % of Direct
Instruction									
Professional	\$18,000,133	\$6,200,796	34.45%	\$17,699,144	\$3,325,605	18.79%	\$28,617,000	\$7,536,000	26.33%
Housestaff	33,220,687	8,267,143	24.89%	14,340,505	2,669,533	18.62%	24,214,000	4,843,000	20.00%
Basic Science	6,959,555	2,438,597	35.04%	1,491,501	322,867	21.65%	8,805,000	2,118,000	24.05%
Continuing Medical Education	2,642,312	743,150	28.12%	637,269	0	0.00%	2,201,000	377,000	17.13%
Other College Instruction	2,642,312	743,150	28.12%	4,209,347	783,584	18.62%	4,403,000	930,000	21.12%
Technical Programs Instruction	1,761,541	494,200	28.05%	0	0	NA	6,604,000	1,131,000	17.13%
Subtotal, Instruction	65,226,540	18,887,036	28.96%	38,377,766	7,101,589	18.50%	74,844,000	16,935,000	22.63%
Research	44,858,327	12,053,015	26.87%	32,857,211	5,617,562	17.10%	70,442,000	12,063,000	17.12%
Patient Services	27,317,545	5,200,999	19.04%	19,588,378	3,320,670	16.95%	66,039,000	11,309,000	17.12%
Public Service	3,628,324	908,217	25.03%	7,910,479	1,352,446	17.10%	8,805,000	1,508,000	17.13%
Total, Primary Programs	\$141,030,736	\$37,049,267	26.27%	\$98,733,834	\$17,392,267	17.62%	\$220,130,000	\$41,815,000	19.00%

Source: University submissions for PEPC Medical Cost Study; data are for FY90

EXHIBIT 7

ESTIMATED COST PER PROFESSIONAL (MD) STUDENT
AT UNIVERSITY HEALTH SCIENCE CENTERS

Activity Category	UF		USF		UM	
	Total	\$ per Student	Total	\$ per Student	Total	\$ per Student
<i>Direct Expenditures</i>						
Professional Instruction	\$18,000,133	\$41,958	\$17,699,144	\$46,092	\$28,617,000	\$51,285
<i>Allocated Indirect Expenditures</i>						
College Administration	3,341,953	7,790	1,806,219	4,704	704,860	1,263
Institutional Support						
University	412,914	963	0	0	0	0
Health Science Center	339,091	790	0	0	1,595,490	2,859
Academic Support	789,499	1,840	561,935	1,463	778,700	1,396
Student Services	73,074	170	110,059	287	816,570	1,463
Scholarships & Fellowships	249,899	583	8,646	23	1,819,580	3,261
Operation & Maintenance of Plant	839,084	1,956	646,744	1,684	1,046,240	1,875
Library	155,450	362	192,003	500	260,780	467
Other					514,410	922
Subtotal Support Services	6,200,963	14,454	3,325,605	8,660	7,535,820	13,505
Total Estimated Expenditures	\$24,201,096	\$56,413	\$21,024,749	\$54,752	\$36,152,820	\$64,790
Headcount Medical (MD) Students		429		384		558

Source: University submissions for PEPC Medical Cost Study; data are for FY90

Conclusions Regarding Medical School Finance

Of the two financial reports, the data submitted to LCME is by far the more comprehensive and informative for state-level monitoring of program activity. The LCME reports include a basic source-use matrix (similar to what the Legislature requested) and more detailed listings of revenues and expenditures. Since these reports are already prepared annually, they could be provided to interested parties at the state level at virtually no incremental cost.

A second observation is that the MD-level of instruction is only one of several important activities being funded by the state at the three medical schools. While the state does have a legitimate interest in monitoring the costs of programs that spend more than \$50,000 per student annually, attention to the costs of other programmatic activities might also be worthwhile.

Finally, we remind the reader that the cost per student data are known to be only estimates. In order to meet the PEPC reporting deadlines, the cost estimates were prepared using a 1985-86 methodology and faculty activity analysis and may not reflect recent changes in the delivery of medical education. As such, the data are most appropriate for informing highly aggregate policy decisions rather than detailed budget analysis. In the words of one university official, the results should be considered to be approximate ranges of costs rather than the precise cost of training a medical student.

Expenditures Per Student for Dental and Veterinary Medicine Education

In addition to requesting the replication of prior studies of the cost per medical (MD) student, the legislative proviso also asked (for the first time) that UF provide cost data for dental and veterinary medicine education students using the same analytic process. This section presents the results of the analysis of dental and veterinary costs using similar formats as the analysis for medicine.

Exhibit 8 shows the distribution of expenditures across instruction, research and service programs for both the dental and veterinary schools. The instruction program (including both professional and advanced instruction) is the largest expenditure category for both schools. The greatest difference in the distribution of expenditures, when compared to the three medical schools, is the smaller role of patient care in the dental and veterinary programs. Exhibit 9 shows the allocation of support costs to each primary program category.

The cost per professional student is illustrated in exhibit 10 for the DMD and DVM programs. Per-student amounts are listed for the direct costs of professional instruction and for each support program category. Dental education, at approximately \$48,000 per student, is more expensive than veterinary education (about \$38,000 per student), but both are well below the \$55-65,000 rates found at the three medical schools.

EXHIBIT 8

ANALYSIS OF DIRECT AND ALLOCATED SUPPORT EXPENDITURES
FOR DENTAL AND VETERINARY PROGRAMS AT THE UNIVERSITY OF FLORIDA

UNIVERSITY OF FLORIDA, FY90
DMD PROGRAM

Activity Category	Direct Expenditures	%	Allocated Support Expenditures	%	Estimated "Full-Cost" Expenditures	%
Instruction						
Professional (DMD)	\$11,263,337	54.63%	\$2,587,737	54.79%	\$13,851,074	54.66%
Ph.D.	209,746	1.02%	48,174	1.02%	257,920	1.02%
Graduate Masters	335,593	1.63%	76,985	1.63%	412,578	1.63%
Advanced Dental Educ	566,313	2.75%	129,883	2.75%	696,196	2.75%
Other College Instruction	629,237	3.05%	145,468	3.08%	774,705	3.06%
Other Instruction	0	0.00%	0	0.00%	0	0.00%
Subtotal, Instruction	\$13,004,226	63.08%	\$2,988,247	63.27%	\$15,992,473	63.11%
Research	5,579,232	27.06%	1,281,825	27.14%	6,861,057	27.08%
Patient Services	2,033,608	9.86%	452,938	9.59%	2,486,546	9.81%
Public Service	0	0.00%	0	0.00%	0	0.00%
Total, Primary Programs	\$20,617,066	100.00%	\$4,723,010	100.00%	\$25,340,076	100.00%

UNIVERSITY OF FLORIDA, FY90
DVM PROGRAM

Activity Category	Direct Expenditures	%	Allocated Support Expenditures	%	Estimated "Full-Cost" Expenditures	%
Instruction						
Professional (DVM)	\$8,427,526	39.24%	\$3,674,275	39.20%	\$12,101,801	39.23%
Residents & Interns	2,145,188	9.99%	937,316	10.00%	3,082,504	9.99%
Graduate Instruction	689,525	3.21%	309,314	3.30%	998,839	3.24%
Other College Instruction	1,149,208	5.35%	496,777	5.30%	1,645,985	5.34%
Other Instruction	0	0.00%	0	0.00%	0	0.00%
Other Instruction	0	0.00%	0	0.00%	0	0.00%
Subtotal, Instruction	\$12,411,447	57.79%	\$5,417,682	57.80%	\$17,829,129	57.79%
Research	9,065,975	42.21%	3,955,469	42.20%	13,021,444	42.21%
Patient Services	0	0.00%	0	0.00%	0	0.00%
Public Service	0	0.00%	0	0.00%	0	0.00%
Total, Primary Programs	\$21,477,422	100.00%	\$9,373,151	100.00%	\$30,850,573	100.00%

Source: UF submission for PEPC Medical Cost Study; data are for FY90

EXHIBIT 9

ANALYSIS OF OVERHEAD BURDEN AS A PERCENT OF DIRECT COST
FOR DENTAL AND VETERINARY PROGRAMS AT THE UNIVERSITY OF FLORIDA

Activity Category	University of Florida DMD Program			University of Florida DVM Program		
	Direct Expenditures	Allocated Support Expenditures	Support as a % of Direct	Direct Expenditures	Allocated Support Expenditures	Support as a % of Direct
Instruction						
Professional (DMD)	\$11,263,337	\$2,587,737	22.97%	\$8,427,526	\$3,674,275	43.60%
Ph.D.	209,746	48,174	22.97%	0	0	0.00%
Graduate Masters	335,593	76,985	22.94%	689,525	309,314	44.86%
Advanced	566,313	129,883	22.93%	2,145,188	937,316	43.69%
Other College Instruction	629,237	145,468	23.12%	1,149,208	496,777	43.23%
Other Instruction	0	0	0.00%	0	0	0.00%
Subtotal, Instruction	13,004,226	2,988,247	22.98%	12,411,447	5,417,682	43.65%
Research	5,579,232	1,281,825	22.97%	9,065,975	3,955,469	43.63%
Patient Services	2,033,608	452,938	22.27%	0	0	0.00%
Public Service	0	0	0.00%	0	0	0.00%
Total, Primary Programs	\$20,617,066	\$4,723,010	22.91%	\$21,477,422	\$9,373,151	43.64%

Source: UF submission for PEPC Medical Cost Study; data are for FY90

EXHIBIT 10

ESTIMATED COST PER PROFESSIONAL STUDENT
FOR DENTAL AND VETERINARY PROGRAMS AT THE UNIVERSITY OF FLORIDA

Activity Category	DMD		DVM	
	Total	\$ per Student	Total	\$ per Student
<u>Direct Expenditures</u>				
Professional Instruction	\$11,263,337	\$39,382	\$8,427,526	\$26,585
<u>Allocated Indirect Expenditures</u>				
College Administration	0	0	1,591,730	5,021
Institutional Support	328,495	1,149	0	0
University	324,122	1,133	260,484	822
Health Science Center	754,649	2,639	291,007	918
Academic Support	0	0	677,547	2,137
Student Services	0	0	0	0
Scholarships & Fellowships	0	0	0	0
Operation & Maintenance of Plant	802,045	2,804	720,101	2,272
Library	148,588	520	133,407	421
Other	229,839	804		
Subtotal Support Services	2,587,737	9,048	3,674,275	11,591
Total Estimated Expenditures	\$13,851,074	\$48,430	\$12,101,801	\$38,176
		9,048		
Headcount Medical (MD) Students		286		317

Source: UF submission for PEPC Medical Cost Study; data are for FY90

Appendix E

**OFFICE OF THE AUDITOR GENERAL'S
PRESENTATION ON THE CONSULTANT'S REPORT**



CHARLES L. LESTER, C.P.A.
AUDITOR GENERAL

STATE OF FLORIDA
OFFICE OF THE AUDITOR GENERAL

December 20, 1991



TELEPHONE:
904/488-5534
S/C 278-5534

OFFICE OF THE AUDITOR GENERAL
PRESENTATION ON THE CONSULTANT'S REPORT ON
MEDICAL EDUCATION FINANCIAL COMPARISONS
FOR THE 1989-90 FISCAL YEAR
FOR FLORIDA'S MEDICAL SCHOOLS AS REQUIRED BY PROVISIO LANGUAGE
TO ITEM 577A OF THE 1991-92 GENERAL APPROPRIATIONS ACT
POSTSECONDARY EDUCATION PLANNING COMMISSION PROGRAM COMMITTEE
MEETING OF DECEMBER 12, 1991

Background

Line item 577A of the 1991-92 General Appropriations Act included proviso language requiring a study be performed by the Postsecondary Education Planning Commission to determine the cost of medical education for the three medical schools in Florida. Specifically the proviso language states:

Postsecondary Education Planning Commission shall conduct a study of the funding for University of Florida Health Center, University of South Florida Medical Center, and the First Accredited Medical School. To the extent that necessary supporting data are available, the study shall examine expenditures over a period of years. The study shall include, but not be limited to, an analysis of the funds which are expended to support students in medicine, dentistry, and veterinary medicine by fund source on a per student basis as well as an analysis of the various activities or cost objectives which are funded by college and fund source. As a basis for this study, the commission shall use the cost accounting procedure which was developed by the Board of Regents as a result of proviso language in the 1985 and 1986 General Appropriations Acts. The commission, in consultation with the Office of the Auditor General, shall expand or revise this cost accounting procedure, as required, to implement the provisions of this study. The commission shall submit a report of its findings to the President of the Senate and the Speaker of the House of Representatives on or before January 15, 1992.

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As stated in the proviso language, the consultant's draft report used the cost accounting procedures derived from the study prepared as a result of the proviso language in 1985 and 1986 General Appropriations Acts. This Office was not involved in either that cost study or the resultant cost accounting procedures. However, we have worked closely with the Commission staff and the Commission's consultant in observing and discussing the procedures used for the consultant's draft report.

We did not perform an audit or a compilation, as defined by generally accepted auditing standards, of the data presented in the consultant's draft report. We did not review the cost accounting procedures use at the three medical schools in accumulating the data presented. Such audit, compilation, and review procedures were not required by the proviso language. However, we did review the methodology used by the Commission staff and their consultant in gathering the data and verified the mathematical accuracy of the data presented in the various exhibits included in the consultant's draft report. The remarks included in this presentation are based on the draft of the consultant's report provided to me on December 6, 1991.

The charge to the Commission to conduct an analysis of the funds which are expended to support students in the three medical schools located within the State by fund source on a per student basis is a complex project. The medical schools receive money from a variety of sources including State appropriations; Federal, State, and local research grants; tuition; gifts; and private practice plans. These funds are used to perform a multitude of activities, only one of which is to educate medical students. Other activities include research, university administration, university and public service, and patient and clinical services.

Moneys received from these various sources that are unrestricted as to use (no external limitations placed on how the funds may be expended) are usually placed in pooled accounts and lose their identity as to source. Normal cost accounting procedures accumulate cost by project or cost

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function, but do not normally identify and accumulate cost by specific fund source. One exception is cost accounting systems established for the use of restricted moneys such as grants. This system is established because the grantor (Federal, State, or local) has placed specific restrictions as to how and for what purposes these moneys may be spent. These restrictions require that a system be established to demonstrate the proper use and accountability of the restricted funds. In the absence of such external restrictions, historically there generally were no reasons for a university to establish a cost accounting procedure to identify expenditures as to specific funding sources. Unrestricted funds may be spent for activities as decided by management of the medical school.

As the three universities do not have a cost accounting system in place to capture cost by unrestricted fund source, Commission staff devised alternative methods to estimate costs by sources. These methods, procedures followed, and the various assumptions made in allocating costs to the various medical school activities are discussed in detail in the consultant's draft report. Our review of the data presented, procedures used, and assumptions made to report these costs raises several issues as presented below.

Review of the Consultant's Report

The consultant's draft report used two sources of information for the 1989-90 fiscal year; the Liaison Committee on Medical Education (LCME) Annual Financial Questionnaire and expenditure information reported to Commission staff in the format of the 1986 cost study.

The LCME report is required annually by the Association of American Medical Colleges. The questionnaire is required for continued accreditation and reports, as accurately as possible, total revenues and expenditures for medical school activities and the sources which support them. The data are used primarily to generate aggregate annual reports, track national trends, compare individual schools in selected areas, and

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satisfy LCME accreditation requirements regarding financial stability. Because the proviso language indicated that the Commission shall use the cost accounting procedure which was developed by the Board of Regents as a result of the previous study required by proviso language in the 1985 and 1986 General Appropriations Acts, Commission staff requested each medical school to submit additional cost data in the same format as was reported in that previous study. Each exhibit in the consultant's draft report discloses the source of the data used.

Our review of the consultant's draft report raises three issues concerning the quality of the data provided by the universities that were used in the consultant's draft report. These issues are summarized below:

- o The use of faculty activity reports to distribute direct and indirect costs to the various medical school activities.
- o The timeliness of the faculty activity reports used by the universities to distribute direct and indirect costs.
- o The effect, if any, on comparability of the cost of medical education between the medical schools because of the exclusions of certain cost from the data submitted to the Commission staff that were otherwise included on the LCME report.

As stated in the consultant's draft report, Commission and medical school staff decided that the most common and logical method of allocating cost data would be the percentage of faculty effort performed in the various medical school activities. The allocation of faculty salaries, the most significant cost element at a medical school, is most difficult because faculty activities often overlap. Faculty activities include teaching, conducting research, performing university and public service, and providing patient care. The common document used in the university environment to allocate faculty cost is the faculty activity report. This report distributes salaries to activities by systematically estimating the

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percentage of effort each faculty member performs on each activity. Each faculty member completes an activity report in which he estimates the amount of time or effort he expends on each activity during the time-frame represented by the report. Individual activity reports are aggregated at the departmental or college level and all expenditures are then allocated on the basis of the aggregate of the faculty effort. This process does not identify the proportion of funds from each funding source for each cost category.

The use of faculty activity reports is an acceptable cost accounting methodology in allocating faculty effort among Federal grants. Office of Management and Budget Circular A-21, Cost Principles for Educational Institutions, permits educational institutions to estimate faculty time devoted to Federal projects as a basis for charging salary cost to grants. However, faculty activity reports, by their very nature, are extremely subjective and any one using cost data prepared on this basis must consider the estimations made by university staff in allocating costs. Decisions as to how each faculty member allocates his time is at the discretion of the faculty member, subject to review by his Dean or other supervisor. Consequently, cost data prepared on this allocation system are only estimates and should not be considered precise.

Compounding the subjectiveness of faculty activity reports as a basis to allocate costs, the activity reports used by the medical schools to allocate the costs reported to the Commission consultant were prepared by faculty members for the last cost study in 1986. Although the medical schools indicated that the respective deans reviewed the activity reports to determine the reasonableness of the effort reported, we question the appropriateness of distributing 1990 costs based on 1986 faculty effort reports. Since the 1986 study, there have been considerable changes in the operations and funding levels for the three medical schools that may have a significant impact on faculty effort and the distribution of effort among medical school activities. Time permitting, it would have been appropriate to have each medical school prepare new faculty activity reports based on

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1990 work effort. However, Commission staff and university personnel indicated that such data could not be gathered within the time-frame required for completing the study.

The cost data on exhibits 2 through 4 of the consultant's draft report come from information reported on the LCME report and the cost data on exhibits 5 through 7 of the consultant's draft report come from information reported to the Commission staff by the three medical schools. Exhibit 1 of the consultant's draft report discloses the differences between these two sources of data for the University of Florida and the University of South Florida. There are no differences for the University of Miami. The consultant's draft report discloses the causes of these differences but does not determine the resultant impact, if any, on the comparability of the cost data between the three schools. The cost of medical education reported on exhibit 7 of the consultant's draft report could be materially affected should the cost data on exhibit 7 be revised to include all the cost data reported on the LCME report. Without an explanation as to the impact, if any, of the exclusions shown on exhibit 1 of the consultant's draft report, the users of this study can not be assured of the comparability of the cost data reported on exhibits 5 through 7 of the consultant's report.

The cost data as shown on exhibits 5 through 10 of the consultant's draft report do not present these cost by fund source as requested in the proviso language. Although cost data is presented by fund source in exhibits 2 through 4 of the consultant's draft report for medical education, these data do not present the cost of medical education by student as is shown on exhibit 7. Because the impact, if any, of the exclusions shown on exhibit 1 is not discussed in the consultant's draft report, the users of the exhibits in the consultant's draft report can not correlate the cost data and source of funds between exhibits 2 through 4 (prepared from the LCME report) and exhibits 5 through 7 (prepared from supplemental cost data submitted to Commission staff). There are no

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exhibits in the consultant's draft report presenting the cost of dental and veterinary education by fund source.

Conclusions

Allocating costs based upon faculty effort is an acceptable practice among educational institutions. However, users of cost data developed under this method must be aware that this allocation process results in cost estimates and not precise measurements.

The use of faculty activity reports prepared in 1986 based upon faculty effort at that point in time does not appear to be an appropriate basis of allocating 1990 costs. Time permitting, faculty effort for 1990 should have been gathered, on a comparable basis, from the medical schools to be used as the allocation basis.

Two medical schools excluded certain amounts from the cost of medical education as reported on exhibit 7. The schools stated that these amounts were excluded to make the cost data comparable among the three schools. If these exclusions are inappropriate the cost of medical education shown on exhibit 7 could be materially affected.